HOW TO BUY PRINTING PROFITABLY

HOW TO
BUY PRINTING
PROFITABLY

A MANUAL *of* PRACTICAL SUGGESTIONS

Edited by
JOHN CLYDE OSWALD

NEW YORK
EMPLOYING PRINTERS ASSOCIATION
1927

Foreword

THIS book is intended for business executives who buy printing of any kind in any quantity and who wish to secure full value for every dollar expended. It shows them how to avoid costly errors in the design of the printed piece as a whole, or in any of its various elements, such as paper, typography, and binding. It enables them to cooperate with the printer to the best advantage.

The general principles set forth in its eighteen chapters are those which the members of the New York Employing Printers Association have found in their experience to be the most helpful generally to the buyer of printing. Many suggestions are offered which have been tested thoroughly in practice and have been the means of saving money for individual customers. Now, for the first time, these valuable principles are put in book form to be kept at hand for constant reference.

It is impossible, of course, to include in this, or in any other single volume, all the useful knowledge which the printers of New York have accumulated in their long experience. From the great mass of practical suggestions submitted by members, only those have been selected which are of wide applicability. For best results in any individual printing problem it is well to consult a competent printer and secure his advice on all doubtful questions.

Table of Contents

CHAPTER VI. *Printing Processes*

Exceptional Cases; Exceptional Printing—The Three Fundamental Processes: I. The Relief Process—Composition by Machine—Illustrations and Engravings—Electrotyping and Stereotyping—II. The Intaglio Process—Photogravure and Rotogravure—III. The Planographic Process—Collotype and Gelatin Printing—Selecting the Best Process.

CHAPTER VII. *The Format*

Where Dummies Help—Select a Standard Size—How Standard Sizes Were Established—Some Advantages of Standardization—Some Specific Standards—The Pattern—When the Requirements Are Exceptional—Consult Your Printer.

CHAPTER VIII. *The Essentials of Good Printing*

Was It Good Printing?—What Is Good Printing?—Legibility—Distinctiveness—Suggestiveness—Suitability to Usage—Longevity—The Choice of Materials.

CHAPTER IX. *The Typography*

The Basic Type Faces—The Spread of Roman Faces—Legibility, the Prime Essential—What Roman Face?—Stick to One Face on Each Order—Headings and Emphasis—Choosing Type for Motif—Choosing Type for Distinctiveness—Size Selection—Choosing Type Face for Type Size—Word Spacing, Leading and Column Width.

CHAPTER X. *The Illustrations*

Making the Explanation Clear—The Two Main Functions of Illustrations—The Growing Use of Illustrations—The Original—Kinds of Illustrations in Advertising.

CHAPTER XI. *Color*

Where to Use Color—Color in Illustrations—Color in Type Printing—Color in Paper and Binding—The Psychology of Color—The Physics of Color—Color Harmony — Color Restraint — Color Processes—The Importance of the Printer.

5

HOW TO
BUY PRINTING PROFITABLY

CHAPTER I

The Printing Job

The Job of the Printed Material

"A printing job."

The majority of business men use this term in talking to printers and printing salesmen. Nine out of ten of them use it as they would "painting job" or "plumbing job"; just a piece of work to be done by printing, and to be bought with strict economy.

The tenth man thinks of it as *a job for printing to do*. He doesn't buy paper and ink and presswork, but *results*.

Adaptation to Purpose, the First Principle

That is the sound basis for buying any kind and quantity of printing, whether it is a thousand letterheads, or a million catalogs. What is the *purpose* of the material? That is the first question to be asked. Once this is answered, the chief task remaining is to see that the printed matter is designed and executed so that it can accomplish its purpose.

True and False Economy in Costs

The factor of economy cannot be overlooked, of course. It is sound business to buy as cheaply as possible. But in buying *results*, cheapness is a matter of percentages—profits divided by cost. A piece of printed matter that cannot do the work entrusted to it is dear at any price.

Commercial printing must be considered in the same light as any other kind of business equipment. With advertising matter, such as booklets, catalogs, and mailing pieces generally, value is quite obviously a question of *results*. The buyer is not interested in the amount of paper and ink he gets for his dollar, but in the amount of sales.

The same rule holds good for office forms, even those for use within the organization. They are all able potentially to *make* or *save*

7

money. The most economical purchase is not that which leaves the largest balance in the bank at the moment, but that which results in the largest balance at the end of the year.

The "Shrewd" Buyer

Some time ago a wave of economy hit a certain manufacturer whose printing bills averaged over $50,000 a year for advertising material alone.

Most of his work had been done by one printer, a house of the highest reputation for character and ability. This house had been given a great deal of latitude in preparing the material and had been consulted frequently in its design as well as its execution.

The new régime changed that policy. A young man was placed in charge of buying all printed matter, largely on the strength of a reputation made elsewhere for being "a shrewd buyer of printing."

Presently he called in, one by one, representatives of a half dozen printing houses—including the old one—and laid before them specifications and a dummy for a booklet. He invited their bids on the job.

The representative of the old house ventured to make a suggestion.

"You are planning to use coated stock throughout this booklet, although there are only two illustrations. Now, if you use a book paper with a coated insert your text will be more legible, and the booklet will be lighter, thus reducing postage. And, besides, you expect this booklet to be kept for reference. Coated stock won't stand so much handling. Then you have a white cover. That's pretty, but soils easily, and the people who will use this booklet aren't particular about clean hands."

He was going on to suggest other improvements, but the "Shrewd Buyer" interrupted him coldly: "We asked you for figures, not conversation."

The "Shrewd Buyer" got his figures and had the pleasure of showing his chief that they were nearly two hundred dollars above the low bid. He "estimated" that if he had been buying the printing for the previous year he would have saved the company more than twice the amount of his salary.

Strangely enough, his estimate was not borne out by the following year's experience. The total cost of the printing was lowered only a little, and complaints of all sorts came in from various quarters, particularly the salesmen. Today the "Shrewd Buyer" is doing his shrewd buying elsewhere, and the old printing house is back at the task of making each printing job do its work properly—and is receiving a fair return for the service it renders.

The Dangers of Competitive Bidding

The policy of buying by competitive bids does not always work out so badly as this. When the buyer's knowledge of printing is as great as the printer's, and his specifications cannot be improved upon, the results may be satisfactory. Similarly, there are men who are competent to act as their own architects or lawyers. But the condition is rare.

Even then there are drawbacks, in that the printer who has secured business on a price basis that leaves him only the narrowest margin of profit is not so likely to put into the work those last little refinements of care in craftsmanship that bring maximum results at minimum costs. Nor does he have the same continuity of interest in the customer's welfare when he divides the business with four or five other printers.

In most cases, however, the chief danger is that the printed material may not be adapted completely to its purpose, and hence be a poor investment for any business man's money.

The "Systematic" Buyer

Another manufacturer who had secured good results by appointing a purchasing agent to handle all buying for his factory decided to adopt a similar plan in his general office. The new plan was applied to the purchase of all supplies and material used in the office—including printing.

Formerly, the various department heads had negotiated direct with the printer. Now they were to draw up written specifications of what they wanted and forward them to the purchasing agent. He was to be the point of contact with the printer.

But so far as the printing was concerned, the new plan fell far

short of expectations. True, in some respects it proved advantageous. Since the buyer now handled more printing orders than any single department head, he gradually acquired a more complete knowledge of the possibilities and limitations of printing than any of them. Often he was able to revise their specifications to advantage.

In two respects, however, he was at a disadvantage. First, he never learned as much about the printing business as the printer knew. Second, he never was quite as familiar with the true purpose and intended use of the various jobs of printing as were the men in the individual departments where they were conceived, planned and used.

One day the buyer asked for estimates from several printers on an important announcement. All but one of the printers accepted, without comment, the list of specifications the buyer had ready for them. One, however, asked some questions.

"I think you need three-color illustrations," he said, "in order to reproduce your product faithfully, which two colors, as now specified, will not do."

"That's out of the question," interrupted the buyer with a trace of annoyance. "That's what our sales manager wanted, but I quickly showed him it would cost too much."

But the printer persisted. Pointing to the dummy he asked, "How would it be to move this illustration over onto page four, and the one on page fourteen to the preceding page?"

"I don't know. The sales manager himself laid it out as you see it. He must have some reason for it; and, besides, I don't want to bother him about it again."

"Would you mind if I went to see him?" asked the printer.

The buyer did not take kindly to this suggestion. Evidently he felt it would be encroaching on his own prerogative. But after the printer pointed out that the rearrangements he had in mind might lower the cost, he grudgingly consented.

On reaching the sales manager the printer again asked about transposing certain illustrations from one page to another. He explained that this would result in a saving in printing time so that three colors could be used, where needed, at a cost probably no greater than to print the announcement as originally laid out. The

sales manager readily agreed to the suggestions and thanked the printer for them. The printer received the job; and his predictions as to a better piece of printing at no greater cost were borne out.

This incident strikingly brought home the fact that printing is more than a commodity to be bought at so much per thousand and produced from a set of predetermined specifications. It led to a modification of the firm's buying policies.

Printing was removed from the list of commodities to be bought solely by the purchasing agent. The actual execution of purchase orders and other clerical details were left in his hands. But he was instructed to encourage direct negotiation between the printer and the department originating the printing. Thus he ceased to be a barrier to the printer's complete understanding of what the printing was meant to accomplish and to the firm's enjoyment of the benefit of his specialized knowledge.

Profiting from the Printer's Advice

There is no field of creative craftsmanship that offers more complexity than printing. Not even architecture has a greater range of possibilities. The elements may appear to be few—paper and ink, pictures and type—but each of them has a thousand varieties and variations. A man might spend a lifetime working with them without becoming master of all. There are, however, some fundamental principles that can and should be known by every buyer of printed material. With a knowledge of these he is in a position to talk intelligently with his printer and secure the further advice and help that may lead to the production of printing that is suited to its job.

It goes without saying that the printer, for his part, must be a qualified master of his craft. Printers vary in natural ability and acquired experience. But most of them, when given the opportunity, can suggest improvements in a piece of printed matter that will get equal results at lower cost, or better results at the same cost or at a cost only slightly greater.

One printer, for example, showed his customer how to prepare a booklet that seemed to have four colors throughout, although only half the forms were printed in four colors. Another, by rearranging the typography of a forty-page book, cut it down to thirty-two

pages and made it more legible than the original. Another, by a well-planned set of office forms, cut down the clerical labor more than 20 per cent. Another solved the problem of keeping a catalog up to date without frequent reprinting.

Printing, when properly bought, can help any business to make money and save money. Proper buying involves, first of all, a knowledge of the purpose for which the material is to be used, and a general understanding of the elements of printing. Second, it means the choice of a competent printer, and such cooperation with him as may permit his service to become really effective. Later chapters will deal with some of the points every buyer should know, and with the steps necessary for real cooperation.

CHAPTER II
The Four Steps in Planning Printing

One Manufacturer's Problem

At a sales convention of a large, nationally known corporation, the question of getting more business from small towns came up for consideration.

The sales manager presented statistics showing that, during the past three years, sales in cities of 5,000 and over had increased nearly 25 per cent, while in towns under 5,000 they had decreased nearly 10 per cent.

He recalled that the same problem had arisen the year before and that the company, largely at the suggestion of its branch managers, had purchased automobiles for its country salesmen. Then he asked for suggestions from the assembled salesmen and branch managers.

The First Step in Planning Printing

A discussion arose at once. For a time it brought out nothing constructive. Instead, it served only to emphasize the difficulties of country selling compared to city selling. The gist of it was that for an equal volume of sales more time was required, first, because the greater distance meant more travel, and second, because the orders were smaller so that more were necessary.

Then a branch manager arose. "I believe," he said, "that my territory, instead of showing a loss of 10 per cent in small-town business, shows a gain of nearly 40 per cent. Is that right?" He directed his question to the sales manager, who consulted his records and quickly verified the branch manager's statement. "I think we agree," he continued, "that the difficulty of getting small-town business is entirely a question of the salesmen's productive time. We have taken a step in the right direction by giving them automobiles. But we haven't gone far enough.

"Assuming, for the sake of argument, that the country salesman can now make as many calls per day as the city salesman, he is still

13

up against the necessity of getting more orders in proportion to his calls because his orders average smaller. That's what we enable him to do in my territory; and yet our plan is a very simple one.

"We have a series of six letters, each giving in detail a convincing reason why our dealer proposition is a real profit-maker for the dealer. I go over the route lists regularly with our salesmen. We pick out the most likely prospects in each town. Then we shoot out the letters to them, and the salesmen call on them and them alone. They don't spend any time on any other dealers. The result you have already seen. In reality they make fewer calls than they used to, but they get more orders because the dealers they do call upon are already at least partly sold."

Strange as it may seem, the other men showed only a mild interest in the branch manager's series of letters. A few of them asked questions on minor points, but that was all. The majority remained silent. A little questioning by the sales manager revealed the reason: they were repelled by the thought of the clerical work which the plan would put upon their shoulders.

They grew enthusiastic, however, when the sales manager suggested that the letters be sent out from the home office and that the salesmen be provided with a form for requesting them. They grew still more enthusiastic when one of the salesmen made a further suggestion.

"It's been my observation," he said, "that dealers don't pay as much attention to form letters as they used to. There's no use trying to fool them into thinking they're personal when there's no personal reference in them. I find, also, that my best selling arguments are my samples. Dealers are always interested in looking at them. They prove that we have the quality. They explain better than any amount of talk why our goods attract customers' attention when the dealer has them on display. So instead of letters, why not use some good printed matter? Then we can show lifelike pictures of our goods, and in other ways, too, we can get the message across better than with form letters."

Further discussion took place. To relate all of it would require more space than this book provides. But it ended with a unanimous vote to delegate to the advertising department the task of preparing

a series of six printed mailing pieces and of devising the necessary forms for the use of salesmen in furnishing names of prospects.

The Second Step

The advertising department was headed by a man who had learned by long experience that before preparing any sales material it was of the utmost importance to find out what arguments or appeals should be used.

In this case, his first move was to find out the six most important reasons why dealers buy the company's goods. Fortunately, he had available an excellent guide in the series of six letters that had already been tried and had produced results.

But he went farther than this. Before the men left the convention to go back to their territories he interviewed most of them.

"Can you recall the last new dealer you have signed up?" he asked. Most of them could. "Then give me the main points that came up in the conversation," he continued, and began to make notes.

In this way he collected a list of the selling arguments which were proving effective in actual practice on the firing line.

From them he selected the six subjects which the six mailing pieces were to cover. From the company's products he selected certain ones to be illustrated in each piece, thus carrying out the suggestion made during the sales convention. Then he carried the idea of illustration still farther; he drew up rough sketches of certain charts to enable the prospective dealer to visualize more quickly the various sales arguments.

The Third Step

All these he drew up in the form of rough preliminary layouts.

The advertising manager had learned—also by long experience— that before going farther it would pay to call in his printer; which he did.

He knew that before writing any "copy" it was only common sense to determine how much space could be allowed. He realized that this depended on how much space would be required for headings and illustrations and on how much total space he could figure on and still keep the mailing weight within two ounces.

This involved paper; and here again he realized that before taking any photographs or making any drawings he must know the kind of paper to be used so as to be sure that it would be practicable to reproduce them properly. To illustrate the company's products in a lifelike way he knew color would be needed; and he realized that much expense could be avoided and better effectiveness secured if the color process to be used and the arrangement of the illustrations in relation to the type were decided upon now.

For these and other reasons—which will be given in later chapters —he realized that for greatest effectiveness and economy it would pay him to consult his printer before preparing any "copy" or "art work."

The printer carefully studied the layouts. He asked to see samples of the products for which illustrations were to be made. He suggested that some of the illustrations be made larger for greater effectiveness. Others he recommended changing to another page in order to save money in the printing process. And so he went through the layouts making various suggestions.

The Fourth Step

The advertising manager's final move was to assign the writing of copy and the execution of art work to various members of his staff.

Because the printing specifications had already been determined he was able to tell the copy writers exactly how much to write on each subject. He was able to tell the men handling the art work the exact size of each illustration, graph and chart, and the method of reproduction or engraving to be employed.

Everyone was able to proceed with a definite, clear conception of the task before him. There was no risk of copy that "ran over," or of illustrations that could not practically be reproduced by the printing process selected. Each was able to do his work *but once*. When everything was complete it fitted into the layout and the whole was ready to turn over to the printer at once without "doctoring."

Better Printing at Lower Cost

The planning of this printing involved four separate, clearly

defined steps. The planning of all printing used in business invariably involves these same four steps. They are:

1. *Conceiving the Need for Printing.* Printing always originates with a consideration of a specific business problem or opportunity, and a realization that printing will be useful in meeting it.

2. *Determining What to Put in It.* If the printing is for use in the selling activities of the business, investigation is necessary to determine what appeals to use. If it is for use in the operating departments, investigation is likewise necessary to determine the essential facts. From these investigations it is determined what the printing should *say* or *record*, whether or not illustrations will help, and approximately how much space will be necessary.

3. *Determining How to Print It.* Next comes the selection of a suitable format, an arrangement of the "copy" and the illustrations (if there are any) in the form of a practical "layout." Then the selection of type, style of engraving for reproducing the illustrations, color, paper, and binding. It is here that an intimate knowledge of printing materials and processes is vital; *here the printer should be consulted.*

4. *Preparing Copy and Art Work.* This can now proceed with certainty so that, when completed, the entire job will be ready for the printer.

These four steps in planning printing will contain little that is new to experienced buyers of printing. But the *order* in which they are given is well worth pausing to consider, for it embodies a principle which is fraught with deep significance to everyone who buys printing in any quantity. It is: *Consult your printer in time.*

Because of his thorough knowledge of printing materials and processes he can, if given the opportunity *before your plans have gone too far,* help you in almost countless ways to secure more effective printing more economically.

Yet many buyers reverse the order of the third and fourth of these steps and do not consult the printer until the copy and art work are completed. Often this work has to be done over again so as to make it practicable from a printing standpoint. Often the copy must be pieced out or cut. Often a different style of illustration must be used. Or, when these changes involve excessive cost, it is often necessary to compromise with a less suitable format or an unnecessarily expensive method of printing.

Other buyers, who may or may not follow the order of procedure recommended here, do not consult the printer at all. They proceed through the four steps in planning their printing, relying entirely on their own knowledge of printing processes and materials for laying out the job, and specifying the type, illustration, color, paper, and

binding. Then they call in the printer, not to consult him, but to ask him for an estimate.

Skilled Advice Free of Charge

In all essentials the planning of printing is analogous to the planning of a building. Probably there are few people who would dispute the wisdom of consulting a competent architect, and paying him a substantial fee for his services, before proceeding with a construction project. But with most people the building of a house is undertaken only once or twice in a lifetime; so the architect is a personage surrounded with the glamour of unfamiliarity. Buying printing, on the other hand, is a more frequent occurrence; to the buyer, the printer appears familiarly as a business man just like himself. Perhaps this is why his advice is not sought more freely.

And despite his capacity to advise as to better printing at lower costs, the printer makes no charge for his service. His charge is only for the cost of the printing plus a fair profit.

The Functions of Printing in Business

More Than a Matter of Paper and Ink

The printing described in the preceding chapter originated with the realization that it would assist in the problem of getting more small-town business.

All printing used in business originates in the same way. No one ever sets out with the deliberate idea of buying a certain quantity of paper and ink. The business man considers printing only when he recognizes certain problems or opportunities in his business, and realizes that certain printing may assist in solving the problems or in taking advantage of the opportunities.

More Profits from Printing

A study of the ways in which printing is being used in business discloses many interesting sidelights on its profitableness in some cases and its lack of profitableness in others.

It has been found, for example, that printing is sometimes issued as a part of a plan determined at some previous time and now partly overlooked. When first issued it served its purpose so well that it was decided to issue more of the same kind regularly. But its original purpose is gradually pushed into the background by the routine details of its preparation; and its usefulness declines, if indeed it does not entirely disappear.

Again, it has been found that printing is sometimes used for performing a task it is incapable of performing, either as efficiently or as economically as other available means.

It has been found also that many business firms have problems which printing could help solve and opportunities which printing could help them to take fuller advantage of; but they are not using printing because they have not adequately realized its capabilities.

What are the rightful and profitable functions of printing in business? A more complete understanding of them would go far toward

a more profitable employment of its capacity to make money—and to save money—for business men.

Printing Promotes Operating Efficiency and Sales

After all, the first object of business is profit. In an individual firm—granting that it possesses adequate capital, a useful product or service, and the other essentials of a successful enterprise—profit depends on two things:

1. Operating efficiency.
2. Sales.

These two sources of profit are fundamental and obvious. Operating efficiency guards the expense of conducting a business so that an adequate portion of its income may be saved as profit. Its income depends upon sales. Comparatively, greater operating efficiency or more sales produce more profit. It may be true, of course, that there is, a point in the development of a business beyond which further expansion brings diminishing returns. But with this one exception—and it is admittedly rare—the principle holds. It applies to all business, whether a manufacturer, wholesaler or retailer, or a service company, such as a bank, insurance company or public utility.

In the furtherance of these two profit-making activities of business —operating efficiency and sales—lies the function of printing in business.

The classification on page 21 will serve to show that nearly all the printing used in business performs one or both of these functions. Certain printing is of a specialized character because of the nature of the individual business it serves. Certain printing comprises the very product on which some individual businesses are based. But even in these specialized cases, there still are the needs of operating efficiency and of sales. These two functions of printing are universal in business.

The Place of Printing in Operating

The merchant who first had billheads printed so as to avoid laboriously writing his name on every bill the first of the month was probably the first to use printing to promote the operating efficiency of his business.

Printing Classified by Function

This list obviously is far from complete; probably a complete list of printing used in business never will be compiled. It is intended only to clarify the major functions of printing in business.

Operating Printing

Orders
Ledger Cards
Customer Record Cards
Receipts
Shop Manuals

Returned Goods Reports
Office Manuals
Memoranda
Inventory Sheets and Cards

Shipping Tickets
Shop Publications
Repair Tags
All factory, office and store forms

Sales and Operating Printing

Letterheads

Shipping Labels
Invoices and Statements

Envelopes

Sales Printing

Folders and Broadsides
Mailing Cards
Illustrated Letters
House Publications
Envelope Inclosures

Package Inserts
Booklets
Instruction Books
Sales Manuals
Packages

Labels
Souvenirs
Catalogs
Displays
Posters

Specialized Printing

Peculiar to the individual business.

Admission Tickets
Time Tables

Programs
Railroad Tickets

Menu Cards
Telephone Directories

Product Printing

Printing which is the product sold by the individual business.

Books
Music

Calendars
Periodicals

Maps
Papeteries

From such simple time-saving uses as this, printing has advanced in usefulness until it does many other things to help the more complex business of today to operate efficiently. One of the greatest corporations of New York is today using more than 16,000 separate pieces of printing to facilitate its operations.

In general, the function of printing in promoting operating efficiency involves the following operations:

1. To control expenses by recording and classifying them for ready and convenient study.
2. To regulate production by recording daily output of each department uniformly so that comparisons may quickly be made, and weaknesses discovered.
3. To record inventories both individually and collectively.
4. To promote the loyalty and interest of employees and maintain healthy working conditions.
5. To analyze sales by dealers, by salesmen, by geographical division, and by product.
6. To control purchases and maintain equilibrium with production and sales.

It is obvious that few of these operations could be performed at reasonable cost unless the agency of the printing press were available to provide the means for the quick, accurate, and uniform recording of the facts on which most of them depend.

The Place of Printing in Selling

It is our purpose in this book to discuss only those types of printing which are customarily secured direct from the printer. Thus in speaking of printing as applied to selling, advertising in periodicals is not included.

The two most clearly defined sales activities are, of course, (1) advertising and (2) personal selling. Naturally, the relative importance of the two varies from one individual business to another. Indeed, some firms utilize only one to the exclusion of the other; but ordinarily both are used. In larger firms they are clearly defined; the one being administered by an advertising manager and the other by a sales manager.

It is to be observed, however, that advertising, although often separated from selling for convenience in organization, is oftener than not a subsidiary division of the firm's general sales activities rather than something apart. Much of the mystery that used to surround

advertising has cleared during the last few years; and it is now better understood that advertising is only one means of selling and never was anything else.

Its difference from personal selling lies largely (1) in its being printed (which has given it its definition as *printed salesmanship*) and (2) in its ready multiplication (which has given it its definition as *mass salesmanship*). The literature of advertising reveals still other conceptions of what advertising is and contains still other definitions of the term.

And so it is hardly surprising that the place of printing in selling is even less clearly conceived and defined.

Some firms that use printing in their selling refer to it as direct advertising. Others call it dealer helps. Others consider it merely as more advertising. Others call it sales promotion.

We shall make no attempt here to suggest a better term. But the truth is that the function of printing in selling is neither advertising nor personal salesmanship, as these terms are normally used. Its function in an individual business is any one or all of the following:

1. To intensify selling effort in localities where sales are comparatively backward.
2. To concentrate selling effort upon specialized groups of prospective customers.
3. To put selling effort in marginal localities not economically reached by salesmen.
4. To secure the sales cooperation of middlemen.
5. To increase the productivity of salesmen by sifting immediate prospects from remote prospects, by obtaining readier audiences with prospects, and by reducing the necessary selling time.
6. To capitalize buying interest aroused by advertising and thus either make sales directly or enable a salesman to close the sale on his next call.
7. To conserve present business.
8. To make sales by itself.

This list of sales tasks which printing is capable of performing is necessarily confined to those of wide applicability. There are, of course, individual firms which do not possess all the problems and opportunities that this list includes. There are others which already are using printing in still more ways than these and in specialized adaptions of them to their own individual conditions. Later on in this chapter there will be given a specific example of the functions to which printing is being applied in an individual business.

How One Business Uses Printing to Promote Operating Efficiency

The following includes only the major items of printing under each head; a complete list would occupy several pages:

1. To control expense:

    —material, records and distribution reports
    —time tickets, and labor expense apportionment records
    —traveling, automobile, and truck operating expense reports
    —repair and maintenance reports
    —tool-room and experimental expense reports

2. To regulate production:

    —daily departmental production reports
    —shortage and average reports
    —total and individual production reports

3. To record inventories:

    —raw material receiving, on hand, and disbursing reports
    —finished product receiving, on hand, and shipping reports

4. To promote the loyalty and interest of employees:

    —bulletins
    —periodicals
    —manuals

5. To analyze sales:

    —order analysis cards
    —daily consolidated sales records by product, county, state, section, class of dealer, and salesman

6. To control purchases:

    —purchase orders.
    —daily "on order" records
    —inventory records
    —stock records
    —invoices
    —receipts

How One Business Uses Printing to Promote Sales

1. **To intensify selling in localities where sales are comparatively backward:**

    —a series of booklets mailed to a selected list of consumers
    —a series of booklets, folders, broadsides, and mailing cards mailed to prospective dealers
    —a series of folders for use of present dealers in distributing to consumer prospects

2. **To concentrate selling effort upon specialized groups of prospective consumers:**

    —numerous separate booklets—some in series—each dealing with subjects of interest to the specific group

3. **To put selling effort in marginal localities not economically reached by salesmen:**

    —standardized series of folders, including samples, securing direct business from prospective dealers in outlying districts
    —varied series of mailings, securing repeat orders

4. **To secure the sales cooperation of middlemen:**

    —a house publication containing actual news of value to the reader and hence of enormous value to the house
    —display and advertising material in wide variety
    —special printed bulletins on seasonal or other special topics
    —manuals of sales instruction

5. **To increase the productivity of salesmen:**

    —38 series of 6 folders for different types of prospects and meeting various kinds of sales resistance
    —between-call sales folders with order cards attached
    —package inserts, envelope inclosures, and folders inclosed with annual statements to stockholders

6. **To capitalize buying interest aroused by advertising:**

    —descriptive, informative booklets and books
    —testimonials

7. **To conserve present business:**

    —descriptive and good-will booklets inclosed with monthly statements
    —explanations of new policies inclosed with monthly statements
    —package inserts

In general, however, these uses of printing in selling, in the words of a well known authority* on marketing, "may easily double the effectiveness of every dollar spent in general publicity or in personal salesmanship."

All Outside Printing Can Promote Sales

What is a letterhead for? One answer might be: to write letters. But it is only a partial answer, because a letter can as easily be written on plain sheets of paper. Another answer might be: so the man who gets the letter will know who it's from. But this is hardly a complete answer, either, because most letters are signed anyway. The truth is that a letterhead, in addition to giving the business name and address, is a means also of suggesting something of the character of the business, uniformly and readily identified. That this is well realized is proved, if indeed proof were necessary, by the constantly increasing attention which business men are devoting to their letterheads.

Similarly, all printing which goes outside the company, and is seen by the public, plays its part in the impression, either favorable or unfavorable, which the company makes. It is for this reason that letterheads, envelopes, shipping labels, invoices and statements, although primarily necessary in the *operations* of a business, are to be considered also as sales printing.

Certain of the metropolitan banks have gone far in this direction. In their letterheads, statements, reports, bond lists, and other printing seen by the public, they have adopted typography as well as decorative design suggestive of ancient Roman architecture. This, in turn, unconsciously suggests stability, strength, and conservatism— qualities which mean much to a prospective customer. Such impressions cut far deeper than mere statements or claims to the same effect.

There even are some kinds of printing, originated primarily by the operations of a business, in which the sales function has grown to outweigh in importance the original function. Packages and labels are examples. Originally packages were only convenient containers for the goods. Then one manufacturer discovered that certain of his numbers sold faster because the shape of the package made them look larger than the others, although they were of the same size.

* George Burton Hotchkiss, Chairman, Department of Marketing, New York University.

Another discovered that the design of his label, when advertised, increased sales because the consumer more readily identified it in the retail store. Another obtained a sales increase merely by redesigning his packages and labels so that they made the package look more attractive and desirable.

So vital a sales influence have packages and labels proved to be that many companies are now using them for products that need no container at all!

Even in such simple ways as these, a better conception of what printing is capable of doing can go far toward increasing its profitableness.

CHAPTER IV

Preparing Material for the Printer

The Second Step in Operating Printing

When a decision is made to use printing, the question of what to put into it follows immediately as the second step in the planning.

The great bulk of operating printing consists of convenient forms for the recording of facts.

Usually, two things need to be considered:

1. What facts are essential?
2. What arrangement is most convenient?

What Facts Are Essential?

A member of the accounting department of a large corporation designed a truck operating expense sheet which was to be filled out daily by the truck driver; but he was not receiving the reports regularly from more than half of the drivers. He decided to investigate. One evening, as the trucks were being put away for the night, he went to the garage, intending to talk to some of the truck drivers.

Several were backing in their trucks as he arrived. One of them climbed down, walked to a high table nearby, leaned his elbows on it and went into a "brown study." The accountant noted, with a thrill of interest, that he had spread before him one of the expense sheets. The accountant was about to approach when he overheard another driver talking. He walked closer to listen.

"This is my last week anyway. I ain't no bookkeeper. I ask you now: didn't I make it out reg'lar every night last week? Then I gets this letter telling me I have to do it over again. It's no use. I'll turn in a report if they want it, but not a history of my life."

The accountant had heard enough. He knew why his reports were not coming in.

Later, a little study enabled him to revise his report, stripping it to essentials, lumping under one head small entries that really did

not need to be itemized, and finally reducing it to a fourth its original size. The new forms served their purpose. The men used them.

Records and reports which omit essentials are obviously a waste. Those that include anything beyond essentials may easily introduce red tape that offsets their rightful value.

What Arrangement Is Most Convenient?

The purchasing department of a manufacturing company was instructed by the production superintendent to furnish him daily with reports showing the orders placed for all raw and semi-fabricated materials, together with delivery promises, the number of different suppliers for each, the price per unit, and a number of other details.

To facilitate this work the purchasing department ordered a large number of printed report forms. Since the department was large, and the various commodities were purchased by different individuals, these forms were drawn up by different persons. As it happened, the arrangement of the information was not uniform.

After these reports had been in effect something like a month, the factory superintendent found that his clerks were spending apparently much unnecessary time in preparing the various master reports from them. A little investigation quickly disclosed the reason.

Since the arrangement was not uniform, his clerks could not draw off the master reports in any uniform arrangement. Each item had to be taken individually and the right column found for it in the master report. In fact, to avoid errors, the clerks had formed the habit of working in pairs, one calling off the figures to the other.

By a change to a uniform arrangement for all reports it became possible for the clerks to place them one at a time across the face of their master reports and by making the columns coincide, merely copy off the individual figures in less than a fourth the time.

When one report is used for comparison with another or in the preparation of another, it is only common sense to arrange them uniformly. This saves time in use; and to save time is the main reason for printing them in the first place. Time is saved also when original reports are arranged in the order in which a person normally thinks of the items they include.

The Second Step in Sales Printing

The second step in preparing sales printing is often more complex than in the case of operating printing.

At the time, we may already have the necessary facts to decide what to put into the printing. If so, it is because the subject already has had our study. If not, the necessary study, or, as it is sometimes called, the research, must now be conducted.

In the case of the printing described in Chapter **II**, the purpose was to sell dealers, or at least to influence them sufficiently, so that they could be more readily and quickly sold by the salesmen. Logically, then, the advertising manager undertook to find out what he should put into the printing—what arguments and appeals he should use—which would most effectively serve this purpose.

Sales Research for Sales Printing

In that case the advertising manager followed what proved to be a comparatively simple means of deciding what to put into the printing. Often, however, much more elaborate work is desirable.

In the preparation of some printing, questionnaires are mailed in large quantities to various classes of customers and middlemen as well as prospects. Sometimes, too, investigators are sent out into the field in order to find out at first hand the true facts as to sales conditions.

In addition to these activities, some firms maintain sales research departments which determine, by various means, the extent of the firm's logical market in various sections of the country, the condition of business in allied fields, the activity of competitors, and similar facts.

Such research work is conducted not alone for its value in the use of sales printing, but as a part of the firm's general sales activity. But printing, being a part of this activity, profits from it.

When the Research Is Already Complete

In other cases no research is needed, because it happens already to have been completed.

A company which had made an important change in its sales

policy began shortly to receive complaints from its dealers. The change was unfair to them, they contended. Complaints were received also from salesmen. They could not meet their sales quotas unless the change in policy was rescinded, they asserted.

As it happened, the change in policy had been made only after careful consideration by the sales executives. Actually it had been suggested by certain dealers as a remedy for a serious trade abuse that was injuring their own profits, the company's profits, and the consumer's satisfaction.

But to the main body of dealers the new policy had to be fully explained so that they would understand its advantages. It was necessary also that the dealer in turn explain it fully to the consumer so that the consumer also would realize that it was to his own advantage. But the dealers took the line of least resistance and didn't explain. So their customers grew dissatisfied and complained. The dealers in turn complained to the salesmen. And the salesmen, instead of explaining, also took the line of least resistance and complained to the company.

A series of folders mailed to the dealers solved the problem. This printing adequately explained the new policy as well as the reasons why the dealer should support it, and why, when occasion arose, he should explain it to his customers.

We cite this case to make clear that, although no investigation was made to find out what to say in these folders at the time they were prepared, it was only because the necessary facts were already available. Sales research—whether so called or not, whether conducted at the same time or not—is an essential part of the work of preparing sales printing.

How to Print It

This, which we recommend as the third step in planning printing— before copy is written or art work executed—need not be treated in this chapter, since it is the general subject to which all the remaining chapters are devoted.

In these introductory chapters, we have discussed it *in its relation to the other necessary steps in planning printing* only because this broader aspect of printing *as a business tool* is a necessary preliminary to any sound discussion of how to buy printing profitably.

Preparing Copy and Art Work

Volumes have been written about copy and art work. It is not our purpose—nor indeed would it be practicable—to summarize here the many ramifications of these important subjects. We are concerned only with their relationship to the general subject of planning printing.

The necessity of actually preparing copy and art work *after* the manner of printing has been determined has already been emphasized. There is no exception to this important principle. At times there is an apparent exception when it appears impossible to gauge in advance how much copy will be needed to convey the message or how many illustrations may be needed to clarify it. But this happens only when the work has not been clearly and fully thought out.

What Is Meant by Printing Service

The term "service," whether we consider it to be in good repute or otherwise, has no adequate substitute. It is in current use in many industries, including the printing industry.

Here it has a variable and, to some, a confusing meaning. However, just as there are four steps in *planning* printing, so there are four types of printing service available from New York printers, in addition to the mechanical operations of *producing* printing.

Of these, the service in advising customers as to layout, type, color, illustrations, paper and binding to be specified—this service corresponding to the third step in planning—is available from all good New York printers. It is a service which practically all buyers of printing can profitably make use of, and will be treated, directly and indirectly, in all the following chapters. For this service the printer makes no charge.

To clarify this last statement it should be added that no charge is made when the printer acts purely as a consultant. You may discuss with him your layout and your specifications; and he will tell you either that you are right or that certain changes would increase effectiveness or reduce costs. Or, you may give him your layout and leave the selection of specifications to him. In either case he will make no additional charge above his normal charge for the printing.

But if you make no layout, and desire that the printer execute one for you, then a charge is made.

In addition to this universal service offered by all good New York printers, there are three types of specialized service offered by a limited number of specialized New York printers. They correspond to the other three steps in planning printing as summarized in the chart appearing on page 34.

Specialized Service

These specialized services are concerned with sales printing, and are offered by a limited group of printers who specialize in merchandising service to clients in substantially the same professional way that certified public accountants render accounting service or that advertising agents render publication advertising or publicity service.

Most of these specialized printers are prepared to serve in connection with all these four steps. They are equipped (1) to advise as to the possibilities for the profitable use of printing in promoting sales and, when such possibilities exist, to formulate plans to utilize them; (2) to conduct sales research activities to determine what the printing should contain; (3) like all other printers, to advise as to the materials and processes of printing; and (4) to execute copy and art work.

If you have sales problems for which you seek a better solution, or sales opportunities you seek to capitalize more fully, you may be able to do it with printing. One of these specialized New York printers may be able to help you. He can tell you whether or not printing will serve and, if so, what form it should take.

Excepting the third, he does not offer these services free. To find out whether or not printing would be profitable to you, to formulate a plan for its use, to determine what material it should contain, and to prepare the material—all these activities, if soundly conducted, require time, work, and the skill which comes from acquired experience.

For doing this work and for placing at your disposal his experience with printing in selling, he acts in a capacity similar to that of the advertising agent, the accountant, or the lawyer, all of whom ask pay for their hire.

The Four Types of Printing Service
Available from New York Printers

Steps in Planning	*Corresponding Service*
I. Conceiving the Need for Printing. This involves a clear understanding of the useful functions in business which printing is capable of performing.	Certain New York printers are prepared to assist business firms in determining the possible profitableness of printing in their sales activities. This is done on a fee basis.
II. Determining What to Put in It. This involves, in the case of selling, market research to determine the effective sales appeals. It involves, in the case of operating, a study of the essential facts to be recorded and their most convenient arrangement.	Certain New York printers are prepared to serve business firms by conducting sales investigations and analyses. This is done on a fee basis. A corresponding service applied to printing used in the operating activities of business would be of little value, and hence is not offered.
III. Determining How to Print It. This involves format, layout, and the selection of type, method of engraving, color, paper, and binding.	All good New York printers are prepared to assist business firms to secure more effective and economical printing if consulted before the specifications have been fixed. For advice as to specifications no charge is made. For layout work a fee is charged.
IV. Preparing Copy and Art Work.	Certain New York printers are prepared to execute copy and art work on a fee basis.

NOTE: The classified directory of the membership of The New York Employing Printers Association entitled "New York, the Printing Centre of the World," will be found useful in selecting the right printer for the specific kinds of service under each of these four heads.

Naturally, the large firm with its complete and competent staff has less frequent need of the specialized printer's service than the firm not employing a sufficient staff for all these tasks. Yet there are today many important New York firms with well organized sales and advertising departments of their own that find the services of such printers immensely profitable.

Because of the printer's familiarity with sources of information and with the technique of sales research, he is often prepared to assemble the essential facts more quickly and at lower cost than could the client's own organization. Moreover, being an outsider, he approaches the problem without prejudice or preconceived notions, so that his final conclusions are often more accurate.

The New York printer who offers this service normally maintains a staff of research men of a skill and ability second to none in this highly specialized and important phase of marketing.

In the preparation of copy and art work, the extent of his business permits him to employ the services of specialists in both.

To the consideration of his client's sales problems, as a whole, he is able to bring an outside viewpoint and specialized knowledge, advantages that are steadily gaining recognition.

CHAPTER V
Selecting Your Printer

How to Judge a Printer

In the preceding chapters we have discussed the four main steps in planning printing. Since profitable printing is far more than a matter of paper and ink, these four steps involve far more.

In the following chapters, however, we shall discuss only the third step which has to do with the materials and processes of printing. Whether or not you utilize the services of the specialized printer in connection with the other steps, you must employ some printer in connection with this third step. Even though you do not seek his advice you must employ him to produce the job. What is the best way to select him?

The United Typothetae of America recently has completed an investigation, among experienced buyers of printing, of the facts these buyers consider when placing printing orders and selecting printers.

This investigation was conducted by first-hand personal interviews. In essentials, a surprising unanimity was disclosed. So it is likely that these factors will closely coincide with your own views. They are:

1. Fair prices
2. Reliable delivery promises
3. Specifications fully lived up to
4. Acceptance only of the kind of work suited to his experience and facilities

Getting a Fair Price

There are two standpoints from which to determine the question of price. One is to consider whether or not the printing serves its purpose effectively and is profitable, from the standpoint of the results it secures in relation to what it costs. The other is whether or not the price charged by the printer is fair, from the standpoint of the materials and labor he has expended in its production. The latter one is the standpoint from which most buyers consider it, and it is the standpoint from which we will now consider it in this chapter.

Because printing is made to order, there are no standard prices against which it is possible for the buyer to make comparisons, as

he can readily do when buying commodities. If he buys canned goods, he can readily find out the current market price for standard grade Alaska peas "2's"; if he buys steel, he can easily ascertain the mill price of box-annealed, one-pass, cold-rolled sheets No. 24; if he buys lumber, he can quickly learn the mill price of 4/4 Wisconsin ash. And so with most commodities. This is impossible with printing because of the thousands of variable factors.

Even for so simple an order as 10,000 letterheads and envelopes, each printed with a name and address only, on the same paper, of the same size, and with the same ink, there are wide variations in costs and prices.

The printers of New York wish it were possible to establish standard or market prices for printing; the task of both buyer and printer would thereby be made easier. But so long as there is variation in quality of service rendered there will be variations in charges for it.

Since there is no standard scale of prices for printing, many buyers endeavor to establish fair market prices by inviting competitive bids on the same order from several printers.

Why Competitive Bids Vary

The more systematic buyers, in order to compare such prices as intelligently as possible, draw up lists of specifications for the use of the competing printers. In this way, they try to make certain that each printer will base his estimate upon exactly the same printing.

Even then, they usually obtain widely different estimates. Out of six estimates, it sometimes occurs that the highest will be double the lowest. In general, there are two good reasons for this.

First, *there are many kinds of printing, and few printers are equipped to produce all kinds with the same efficiency and economy.* An excessive estimate sometimes is the result of a printer's figuring on work that is outside his rightful field. Even the commonly accepted classifications of printing, such as "commercial" printing, "job" printing, and the like, do not define an individual printer's field. There is no rule —no definite formula—by which a buyer may select in advance the most economical printer in each case.

But one thing he can do. He can make sure that he selects a printer who follows a fixed policy to accept only the kind of work

that he is equipped to do economically and well; when such a printer is offered other work, he declines it, and refers the customer to a printer who *can* handle it advantageously.

The second reason why estimates vary is that *every printing job contains that which cannot be specified—craftsmanship.* Which one of the different kinds of overlays is required for these cuts? What grade, weight, tint, translucency, and reflecting quality of ink are required? Which one of the many styles of half-tones is required? Must the presses be run at half speed or may they be run at full speed? How much time will be necessary in order to secure proper color and distribution of ink? Must offset be avoided by slip-sheeting? Is careful make-ready desirable or will hasty make-ready be good enough? These and a great many other similar questions must be answered by the printer about any printing on which he estimates or which he produces. On the answers he makes depends whether the estimate will be high or low. They represent the craftsmanship—or lack of it—that he proposes to devote to the work.

No one but the printer knows what all these things are, and what they involve. No printer, in his normal contact with his customers, could hope adequately to explain them. They represent the craftsmanship of his trade which it has taken him years of apprenticeship to learn—or, as is usually the case with the low-priced printer, which he never learned—just as in the making of pianos or in other trades where handwork outweighs machine work, craftsmanship is supreme.

Since printing in business is a practical matter, used and valued only for what results it can produce, it follows that the kind of craftsmanship it warrants is also a practical matter. It is a question of what it needs in order to serve its purpose most effectively. More is a needless expense. Less is equally expensive because it impairs effectiveness.

If all printers invited to bid on an order were to figure on the same craftsmanship as well as the same specifications, their estimates would show far less variation.

What One Buyer Found

Few who enjoy the convenience and comfort of an automobile have even an elementary conception of the intricacies of the engineering and production problems involved in its manufacture. Even

Two Different Booklets—
Specifications the Same

An order of booklets produced according to the following specifications proved so profitable that the customer decided to duplicate it a year later. But he gave the order to another printer who bid nearly 25 per cent lower. The printer followed the specifications to the letter, but the printing he delivered was so vastly different that the customer could not even use it. The reason is explained in the text.

Description: Booklet
Quantity: 125,000
No. of pages: Inside 16
Cover: 4 pages
Page size: 9 x 12
Cover page size: 9 x 12
Colors, inside: Orange and black
Colors, cover pp. 1 and 4: Red, blue and yellow
Colors, cover pp. 2 and 3: Blank
Engravings, inside: 8 half-tones and 2 line, furnished
Engravings, cover: 3-colors line and Ben Day, furnished
Type page: 6¼ x 8¾″
Size and style of type: 10 pt. Scotch. Display type, see dummy
Paper, inside: 80 lb. ————* coated
Paper, cover: 65 lb. ————* antique
Show press proof: Yes, of all forms
Binding: Saddle stitched with 3 wires, trimmed flush
Packing: In bundles of 100
Delivery: F.O.B. New York City

* Trade name.

a trip through an automobile plant could give them little more than a glimpse.

So, there are few who can tell, from an inspection of an actual piece of printing, all the craftsmanship that has entered into its production. This is why it is so seldom realized that a difference in the estimate usually involves a difference in the printing even though the specifications remain the same.

A manufacturer of an item of household equipment secured excellent results from a descriptive booklet. Since the appearance of his product was a strong sales factor, it was important that the printing be pleasing in appearance. His printer gave him a booklet that excellently met these requirements.

A year later, he decided to issue an equal quantity of the same booklet. Hoping to save money, however, he secured competitive bids from several other printers, one of which was nearly 25 per cent below what he had paid the previous year. He accepted the lower bid.

What he expected, of course, was the same printing for 25 per cent less. What he got was totally different printing. The quantity, the paper, and all the other items specified were the same, but even though a reprint job the craftsmanship was not. The illustrations, so beautiful and true to life the year before, did not look like the same product at all. The colors did not match. The satiny appearance of the previous year had given way to an ugly, muddy tint.

"Who'd want to buy one of those?" the buyer asked himself as he saw his product thus forbiddingly portrayed. The type style, by its unattractiveness, surrounded the product with an atmosphere of undesirability. In these and other ways that could not be specified had the printer saved the buyer 25 per cent.

Class A, B, C, or D

A buyer asked eight printers for estimates on an important order. He received seven of them the next day. The eighth printer did not return with his estimate until three days later. When he did he handed a written estimate to the buyer without comment.

"Your price looks unusually high," commented the buyer. "In fact it is higher than any of the other quotations I have received. I

don't mind telling you what they are." And he read off to the printer the other and lower estimates.

"I expected that," replied the printer. "So I have come prepared. The estimate I just gave you is for Class A work—the kind of work I think you need. However, that is up to you. If you want lower-priced work, I can give it to you as easily as any other printer can. Here are three other estimates," taking them from his pocket and passing them to the buyer. "They are based on what I call Class B, Class C, and Class D work. You'll notice they give you quite a range of prices."

"Why, yes!" remarked the buyer, puzzled. "This Class D price of yours is way below any of the others. What are you driving at?"

"I can explain it to you by comparing printing to something you know more about. Automobiles, for instance. I have here two automobile catalogs. I will open them to the last page where the list of specifications appears but without letting you see their names. Now let's run through the specifications. First there is the motor. Both are 29.4 S.A.E. horsepower, bore $3\frac{1}{2}''$, stroke $5''$." And the printer went through the other specifications in the same way. There were minor differences in the brakes, and some other details, but, in the main, they might well have been the specifications for the same car.

"Now which is the better car?" asked the printer when they had finished.

"I should say they are about the same," replied the buyer.

"Yes, so would I. Now look at the names." The buyer did so, his curiosity aroused. To his surprise, both were of well known cars, one selling for slightly less than $1500, the other for slightly more than $3000.

"Now that you know the names, you know, at least in a general way, why the higher priced car is worth more. You know it has more crankshaft bearings and that they're more carefully aligned. You know . . ." and here the printer mentioned various other details of superiority.

"The same differences exist in printing," he continued. "Some printers always estimate on Class A work, and so they get a reputation among buyers as high-priced printers. Others always estimate on Class D work, and so get a reputation as low-priced printers.

Others try to estimate on the class of work they believe each individual order warrants, so that in competitive comparisons they are sometimes high and sometimes low. That's what I do."

We cite this case because we believe it further serves to make clear that a series of estimates from different printers is of limited practical value to the buyer because they represent a wide range of quality or craftsmanship among which intelligent comparisons are impossible because there will always be a corresponding variation in price. Few printers, in actual practice, have any clearly defined grades of work such as the printer has mentioned in this incident; he used his designations of Class A, Class B, Class C, and Class D chiefly for the sake of illustration.

A More Certain Way to Get Fair Prices

The principle of buying on a competitive basis is accepted by New York printers as a recognized business procedure where service is not a factor and when the practice of asking for estimates is not abused.

At the same time, the buyer who secures estimates unnecessarily is increasing his printing costs by so doing. There is more than one reason why this is so.

One is that it increases the printer's cost of doing business, which inevitably is reflected in his selling prices. If a buyer secures competitive bids from six printers for each job, five must go to the expense of preparing estimates without getting business; for the buyer can give the job to only one. In the course of time, each of the six printers may obtain a part of the business, since the same one cannot always be lowest. In the long run, each may get approximately one order out of six. But on the average he has to prepare approximately six estimates for every order he secures; and this added expense inevitably finds its way into the prices he must charge.

The same policy also brings about an indirect, but nevertheless real, increase in cost that never appears in the printer's price. It is the increased cost in the buyer's own office. He conducts three interviews with each of the five unsuccessful printers, the first to tell them about the printing so that they can estimate on it, the second to discuss their estimates, and the third to tell them that their prices are too high. To this must be added the clerical and stenographic

expense of preparing the five extra copies of manuscript and dummy for the printer's use in estimating. It adds to the buyer's cost of doing business as inevitably as it adds to the printer's.

Probably no buyer, and least of all the one who must watch costs carefully, would continue such a policy if he knew of a better way to insure his always getting a fair price. *There is a better way and one that in the long run will spell lower prices.* It is: tie up with a printer who conforms to ethical standards of business practice.

Getting What You Want from the Printer

High standards of business practice are embodied in the Code of Ethics of the New York Employing Printers Association which is reproduced on page 44. This declaration is well worth a careful study. Once a buyer of printing grasps its true significance and finds out that it is being lived up to, a new era of printing satisfaction, economy, and profitableness is his. Particularly is it worth noting that in all important respects it coincides with the printing service that buyers consider most important, as revealed by the investigations summarized early in this chapter.

Although this book is sponsored by the New York Employing Printers Association, its members do not wish to imply that there are not capable and reliable printers among the non-members. It is only fair to say that any printer who conducts his business in accordance with similar ideals is a good printer to tie to. For the buyer who has not yet discovered that kind of printer, a safe and convenient test is to find out whether or not the printer is a member of the Association.

Tying to the Printer

Generally speaking, a business firm will find it most profitable to tie to two printers: one for sales printing and one for operating printing. There are exceptions, of course, either by reason of the firm's unusually large or unusually small requirements, or by reason of the specialized character of its printing. In all cases, however, the important principle is to buy printing regularly from the smallest practicable number of printers, rather than to scatter the business among many.

Probably the most important advantage is the opportunity this

The Code of Ethics
of the members of the New York Employing Printers Association

These printers have adopted a code of ethics governing their relations to each other, to their employees, and to their customers. The following is a summary of their policy toward customers:

1. To test every transaction by the standard of truth and justice

2. Not to misrepresent or overcharge the confiding

3. To get a reputation as printers whom people can trust with their work without competitive bidding

4. Never to enter a charge that cannot be proved, by competent evidence in a court of justice, to be a fair competitive price

5. On no account to consent to pay commissions to bookkeepers, secretaries, purchasing agents, or others who have work to give out

6. When offered work they cannot do, to decline it and refer the customer to the printer who can do it

7. To establish the same prices for all work whether or not a price is named in advance

gives the printer to familiarize himself more completely with your business and with the way printing serves it. As already emphasized, printing involves many other things, closely related to your business, besides the paper and ink of which its physical form consists. It always will be most profitable when its physical form is considered and produced by a printer who fully understands these other factors. He gains this understanding naturally when he handles your printing regularly and thus comes in contact with you frequently.

It is then that he is able most readily to give you the benefit of his specialized knowledge in helping you to get the kind of printing you need and want, at the most economical cost. If he sees you only occasionally, because you give him orders only when he happens to submit the lowest bid, he cannot do this even if he felt an inducement to try. He cannot afford to when his chance of getting the order is speculative; he is unable to do so when he does not understand your business and the purpose of the printing more than superficially.

But when he is your regular printer he exerts himself to the utmost to give you effective, suitable, and economical printing. And if his estimate should occasionally be higher than you think you should pay, he will usually be able to tell you what changes to make to bring the cost within your limit and still keep it suitable for its purpose. Indeed, if economy is paramount, as it sometimes is, it is no exaggeration to say that he can usually show you how to obtain lower costs than you could possibly obtain by getting competitive bids.

·Lowering the Competitive Price

A mail-order company was faced with a dilemma at the time that the third-class postal rate was increased 50 per cent. This increase in their postal bills almost exactly equaled their net profit.

For their advertising they used folders which had been costing $15 a thousand. They had been mailing them for one cent apiece, or $10 a thousand. From each thousand mailed they averaged sales on which the net profit was almost exactly $5—*the amount of the postal increase.*

At first they did the rather obvious thing to avoid paying the extra $5 postage. They discontinued the folders and began using 24-page booklets, which, by one of the peculiarities of the law, could

still be mailed for one cent apiece. But sales fell off. The booklets didn't sell. Probably it was because the small pages allowed inadequate display. Perhaps there was some other reason. But whatever it was, they knew they must go back to folders even at $5 a thousand higher postage.

They knew also that it would be fatal to try to make up for the increase by raising prices. They had tried it before. So, in their dilemma, they came finally to the printing on which they had been spending $15 a thousand. They would have to cut it to $10.

They invited bids from twelve printers. They impressed each one with the necessity of "sharpening his pencil." They were dismayed when they received the quotations. Not one was even as low as the price charged by their regular printer.

As a last resort they called him in. He brought a proof of one of their former folders, of which he had kept the type standing.

"How do you like this?" he asked as he spread it out on the buyer's desk.

"Why, it's our last folder!" exclaimed the buyer. "But it's on a different kind of paper. What's the idea?"

"To give you a lower price," said the printer. "I expected you'd have to turn some corners in case your booklet idea didn't work and you had to go back to folders and pay the extra postage. So I experimented a little with cheaper paper. This is it. Now, if you will accept this paper, not change more than one side of the folder between any two printings, and increase your runs $33\frac{1}{3}$ per cent, ordering correspondingly less often if necessary—if you will do those things, I can give you a price of $10 a thousand."

It is so obvious that this printer's ability to save the day for his customer was due to his intimate familiarity with his customer's problems that it is unnecessary to do more than call attention to it. Lacking such familiarity, other printers failed.

Other Advantages of a Regular Printer

Once you have selected a printer of high business standards and have verified by actual dealings with him that he is a printer of integrity, there are still other advantages of tying to him regularly.

Since printing is made to order and must be ordered before it is

produced, it always involves an element of speculation. When it is finally delivered to you, will it be exactly what you need, want and expect in all particulars? Will you actually receive it when you need it, instead of a day, a week or a month later? The best insurance is a printer of known reliability and integrity.

When an unknown printer offers a lower price or glibly promises an earlier delivery, remember that his integrity and reliability are your only safeguard. You have not yet seen what he will finally give you for his lower price. You have only his word that delivery will be made on time.

So, in selecting a printer, the important principle is the same as in selecting your sources of supply for anything else. Select a good one to begin with. Give him enough of your business regularly to allow him to grow familiar with your requirements. Make it unnecessary for him to go to excessive sales expense in obtaining your orders. You will profit in three ways: (1) Your printing will cost less, (2) it will be more effective, and (3) it will be more suitable for its purpose than under any other plan you can adopt.

Having selected a printer, there remains the question of the printing processes and materials to be utilized. In the chapters immediately following we shall treat these processes and materials. We shall point out the things you, yourself, can do in specifying them and the more specific ways in which your printer can serve you.

CHAPTER VI
Printing Processes

Exceptional Cases; Exceptional Printing

The advertising manager of a large manufacturer was talking to his printer, when his secretary entered and placed on his desk a set of photographs.

The manager evidently had been expecting them, for he grasped them eagerly and examined them closely. Then, knowing the printer was an excellent judge of photographs, he passed them to him.

"How do these prints appeal to you?" he asked. They were large prints, showing an almost life-size reproduction of one of the company's products.

"From an artistic standpoint," commented the printer, "they're too sharply focused, but if the purpose is to show how the goods actually look, they're almost perfect."

"That's what they're for," said the advertising manager, pleased. "They're for use in our salesmen's portfolios."

"How are you planning to print them?" asked the printer.

"We're not going to print them. We have only 75 salesmen. I know enough about half-tone printing to realize that by the time we had plates made and paid for printing so small a quantity, the cost would be higher than real photographs."

"Possibly so," rejoined the printer, "but you won't need half-tone plates. I can print them for you at about half the cost of photographs. Or, for about the same cost as photographs, I can print them for you in the natural colors of the originals. Since you want your salesmen to be able to show your products as attractively as possible, I should think that would even be preferable to photographs."

"How is that possible?" asked the advertising manager in surprise. "How can you print photographs without making plates?"

"We need a plate to print from, of course," explained the printer. "But a half-tone, although perhaps the commonest, is only one kind of printing plate. In this case, where only a small quantity is

needed, nothing is so satisfactory or so economical as the gelatin, or, as it is sometimes called, the collotype process. The cost of the plates is trifling. They would be impracticable for a larger quantity than two or three hundred, but for a case like this they are ideal."

Probably there are many occasions like the one just described in which printing could be used advantageously but is not used at all, simply because the buyer does not realize the many printing processes now available, and the special purposes for which each is useful.

The Three Fundamental Processes

All printing, regardless of the individual process employed, consists of the impression of a design in ink upon a plane material, usually paper. Printing processes, therefore, may be defined as the means employed to transfer the ink, in the design desired, to the paper. The design consists of (1) dots, as in half-tones, (2) lines, as in type or line illustrations, or (3) solid areas, as in backgrounds or tint blocks.

Writing, drawing or painting with pencil, pen or brush, although hand processes, do the same thing that printing does. They produce designs consisting of dots, lines or solid areas. The difference is that printing makes duplicate copies rapidly. Therefore a printing surface containing the design is first prepared, usually with metal, so that when inked and impressed upon the paper it is reproduced. The printing surface is analogous to the dies used for producing stampings or forgings in the metal trades. This printing surface is prepared by one of three fundamental processes: (1) relief, (2) intaglio, and (3) planographic. All printing processes are variations of these three.

I. *The Relief Process*

This is the oldest, simplest and today the most universal and extensive. As its name implies, its printing surface stands out in relief above the surrounding metal. It originated with letters cast from soft metal named *type*.

With a sufficient quantity, these types could be arranged into words, and spaced into sentences and paragraphs. One of the earliest products of this individual type process was the now-famous Gutenburg Bible.

But the setting of type by this method was laborious and slow. It possessed another defect, in that after use and reuse some letters wore more rapidly than others, so that in time the printing would become uneven and illegible.

Composition by Machine

The mechanical art of printing received tremendous impetus when typesetting by machine was developed. Printing from type set in this way can always be even and legible, because it is new type. There is a further saving over the former hand method, in that after each job of printing has been completed the type is melted and re-used in the same way. By the former hand method, it had to be distributed a letter at a time.

Illustrations and Engravings

The first means of printing an illustration by the relief process was the *woodcut*. The design was traced on a block of fine-grained hardwood and then the remainder of the surface was cut away, leaving the design standing in relief.

Later, the so-called line and half-tone *engravings* (more properly but not commonly called etchings) came into extensive use. Photography is employed in their production; and the process is called photo-engraving.

Photo-engraving, by its accuracy, speed and economy, has replaced almost entirely all other processes for the printing of illustrations.

Considering the value of illustrations in printing, it is no exaggeration to say that the great spread in both the general use and the business use of printing during the past half century is very largely the direct result of the invention and continued improvement of the art of photo-engraving.

In its essentials, photo-engraving is simple. A negative of the original* is made by a camera substantially as any photographic negative is made. Then the plate, usually of zinc or copper, is coated with an actinically sensitized film and exposed to light through this negative in substantially the same way that a photographic print is made.

---

* The original may also be a type page.

The Three Fundamental Printing Processes

Relief or Letterpress

Designs raised in relief above the surrounding surface.

Varieties:

Hand-set type	Woodcuts
Linotype	Line and half-tone engravings
Monotype	Electrotypes
Intertype	Nickeltypes
	Stereotypes

Intaglio

Designs etched or engraved below the surrounding surface.

Varieties:

Etchings	Gravure
Steel and copper plate engravings	Photogravure
Mezzotints	Rotogravure

Planographic

Designs of grease or oil in a surrounding moistened surface.

Varieties:

Lithography	Offset
Artotype	Heliotype
Collotype	Albertype
Gelatin	Aquatone

The exposure renders insoluble that portion of the film represented by the lines, dots, or masses of the design. The remainder is washed off; and the portions of plate thus exposed are etched away with acid.

Methods of shading are now available, of which the commonest is known as the Ben Day, by which engravings of line drawings may be rendered more lifelike. A man's suit of clothes may be given a texture; a house may be given various tones to resemble masonry or frame; and in similar ways drawings may be reproduced more realistically at reasonable cost.

The manipulation is the same in making half-tone engravings except that the plate is photographed through a *screen*, which is a plate of glass bearing fine opaque lines at right angles to each other. Thus the design is represented by numerous tiny dots, some heavy and some light, to assure the proper distribution of printing ink to represent the lights, shadows, and intermediate tone gradations.

Electrotyping and Stereotyping

The books and newspapers we read are almost never printed from the type or the photo-engravings we have just been describing. Type has been set, and, if there are illustrations, engravings have been made; but they have been used only as molds for electrotypes or stereotypes; and it is these that have been used in the press.

Type is cast from a soft metal alloy chosen more for its molding properties than for its durability. Beyond 20,000 impressions wear sometimes becomes noticeable, although runs of 50,000 and more are not unusual. Photo-engravings have similar limitations.

Likewise, there are variations in the hardness of hand-set type, linotype, monotype, copper photo-engravings, and zinc photo-engravings. In any attempt to print from a combination of these, a point is soon reached when unequal wear results in uneven printing. It is usually impracticable.

Such complications are avoided by making electrotypes or stereotypes of type, engravings, or entire pages of both. Electrotypes are commoner; stereotypes are confined almost entirely to use in printing newspapers.

In electrotyping, a negative is made by pouring melted wax or lead upon the type or the engraving. After setting, it is carefully removed

and coated evenly with graphite upon which copper or nickel is electrolytically deposited exactly as in electroplating. When this deposit has reached the necessary thickness, it is taken from the negative and backed with wood or metal.

Nickel, although more expensive, is more durable than copper; and is an economy in printing large quantities. In color printing, nickel is sometimes necessary. The pigments used in certain colors of ink, notably red, attack copper but are resisted by nickel.

In stereotyping, a negative is made of papier-mâché, which after setting serves as a mold for type metal.

II. *The Intaglio Process*

Intaglio printing owes its name to the cameo and intaglio periods in jewelry. A cameo is above the surface, an intaglio below. In relief printing, the design, which is above the surface, is inked, and, on contact with the paper, prints. In intaglio printing the design is *engraved* or *etched* into the plate, below the surrounding surface; ink is placed in these depressions, so that when impressed on the paper it adheres.

Nothing approaches the relief process for rapid and accurate printing of words; and the intaglio process was originated primarily for the reproduction of illustrations only. It is still of practical usefulness chiefly for illustrations.

Photogravure and Rotogravure

The photogravure is a hand process, expensive, and of limited commercial usefulness. A fine sensitized resinous *grain* is applied to the surface of the plate, by means of which the illustration is photographically transferred to it and then etched in by acid. It is a photo-engraving process, the manipulation being similar to that already described under *Illustrations and Engravings*, except that the design itself is etched into the plate. It reproduces photographs beautifully and with a "grain" invisible to the naked eye.

From the photogravure has been developed the rotogravure, in which the substitution of a half-tone screen in place of the hand-manipulated grain and of the rotary for the flat-bed press in printing has brought down the cost so that it is of commercial value. The

screen is less noticeable than in the case of the relief half-tones, and a less expensive uncoated paper may be used. In a sufficiently large quantity the saving in paper may compensate for the higher cost of making the plate as compared to relief printing.

III. *The Planographic Process*

The two main examples of the planographic process are lithography and offset printing, as they are called, although offset is a lithographic process done by an indirect instead of a direct method. The principle is chemical rather than mechanical, and is based upon the repulsion between oil and water.

In lithography, which means "stone writing," the printing surface is a flat, porous stone or a sheet of metal rendered similarly porous. Upon this porous surface the design is fixed by chemical means. The remaining surface is moistened between impressions with water, so that when the ink is applied (lithographic ink must be greasy) it adheres to the parts covered by the design, but is repelled from the surrounding moist surface.

In offset printing, the design is first transferred onto a rubber blanket, from which it is offset upon the paper. As the rubber is yielding and can be pressed into the finest interstices of the paper surface, the offset process can be used to produce photographic illustrations with extreme fidelity and beauty on uncoated and less expensive paper than is required for the relief process.

Compared to the relief process, the expense of preparing the lithographic printing surface is high. When the printed matter contains type, as most printed matter does, the type must be set by one of the relief processes and the necessary printing plates made from a proof. When the quantity is large enough, however, the saving in paper, as in the case of rotogravure, may equal the greater cost of preparation.

Collotype and Gelatin Printing

The collotype is the commonest of a group of planographic photo-gelatin processes known variously as Woodbury type, artotype, heliotype, and albertype.

The process consists in transferring the design photographically to a sensitized gelatin film with which the plate has been coated. The

chemical change is such that ink adheres to the design and is repelled from the unexposed portions that have absorbed water. Thus the plate is, in effect, a lithographic plate.

As the ink is in exact proportion to the lights and shadows of the original, it may be used for extremely accurate reproductions of photographs of soft tone gradations without grain or screen. The printing surface, being only gelatin, seldom serves for more than 200 to 300 prints, but as the cost of the plate is trifling, it is particularly adapted to small runs. It is useful not only for small quantities of photographs, but also for small runs of previously printed type matter.

Selecting the Best Process

As already pointed out, the relief process is far more extensive than both others combined. This is because it is clearly the best for type and for all kinds of illustration except photographs. By means of half-tones it serves well even for photographs; and for brilliance of color and sharpness of image it is actually supreme.

It is chiefly in obtaining softer modulation of color and gradation of tone in photographic illustrations, *on the same paper which best reproduces type*, that the other processes are useful. It is one of the limitations of relief printing that type prints best on soft surfaced papers, while a half-tone, the only means of reproducing photographic or other illustrations of graduated tone, prints best on hard surfaced papers.

By means of the rotogravure or offset process, both may be reproduced to excellent advantage on soft surfaced paper.

The choice of process depends, therefore, on whether or not photographic illustrations are to be a part of the printing. It is chiefly when they are important, and when the quantity to be run is large, that the intaglio and planographic processes begin to have advantages over the relief. In this, as in other matters, the best way to know which is best in any particular case is to consult your printer.

CHAPTER VII

The Format

Where Dummies Help

It is often helpful, in deciding what format will be most useful, to make up several blank paper dummies, from which a choice may be made. A dummy provides a rough visualization of the finished printing. Later, it is useful for the layout.

It should be emphasized, however, that dummies at this stage are useful only for visualizing the format, and not for selecting the kind of paper to be used.

It is always best to select first the kinds of type and illustration which best serve the purpose of the printing, then, from the wide range of available kinds of paper, select the one on which the type and illustrations will reproduce best. To reverse this order is to limit our choice of type and illustration unnecessarily with the possibility of being compelled, when too late, to make unsatisfactory compromises.

Select a Standard Size

Whether to use a single-sheet form, a folder, or a book is ordinarily a simple question of arithmetic, once the page size has been determined; for then we need only compute how many pages the copy and art work will require.

The logical starting point in determining format, therefore, is to decide the page size.

If we are to avoid needless expense for paper and needless delay in obtaining paper, we will select a *standard* size that may be cut without waste from one of the standard paper-sheet sizes regularly carried in stock by printers and paper merchants.

If the printing is to be mailed, we will select a size for which standard stock envelopes are available; and if it is to be filed, we will select a size that fits standard filing equipment.

The printing, paper, and allied industries, in cooperation with the United States Bureau of Standards, have greatly simplified this task for every user of printing by selecting as standard the eight sizes of paper sheets shown on page 57.

Simplification of Paper Sizes

As a result of a general conference of representatives of manufacturers, distributors, and users of paper, which met at the Bureau of Standards in Washington on June 19, 1923, the Department of Commerce, acting as a centralizing agency to bring these groups together and to support the recommendations mutually agreed upon by them, has recommended that the following sizes of paper shall be recognized standards effective July 1, 1924:

Stock sizes, general printing and publishing

26 x 29* inches; 29 x 52 inches
25 x 38 inches; 38 x 50 inches
32 x 44 inches; 44 x 64 inches
35 x 45½† inches

Stock sizes, book publishing

30½ x 41 inches; 41 x 61 inches

Stock sizes, forms and letterheads

17 x 22 inches; 22 x 34 inches
17 x 28 inches; 28 x 34 inches
19 x 24 inches; 24 x 38 inches

These recommendations have been accepted by the following Associations:

National Paper Trade Association

United Typothetae of America

Direct Mail Advertising Association

National Association of Purchasing Agents

Wholesale Stationers Association of the U. S. A.

National Association of Steel Furniture Manufacturers

American Paper and Pulp Association and several affiliated associations

Association of National Advertisers

National Publishers Association

National Association of Book Publishers

Employing Bookbinders Association of America

New England Paper Merchants Association

American Association of Advertising Agencies

National Association of Employing Lithographers

---

* This size is not generally stocked by paper merchants.
† The size commonly stocked is 35 x 45.

How Standard Sizes Were Established

In 1921 a report was rendered of the investigations made by the Federal American Engineering Society into the subject of "Waste in Industry." Six industries—the building trades, men's ready-to-wear clothing, boots and shoes, metal trades, textiles, and printing—had been surveyed. The report brought out that in these six industries there existed a preventable waste amounting to $10,000,000,000 annually which could be saved through standardization and simplification alone.

In the same year, committees on simplification of paper sizes were appointed from the paper, printing, publishing, and allied industries. From manufacturers, distributors, and users of paper, these committees undertook to determine the relative importance and usefulness of the various sizes then being supplied.

In the course of its investigations, the committee collected over 27,000 specimens of actual printing, which were classified by size as follows:

Group Size	Quantity	% of Total
3½ x 6¼	6,506	23.7
4 x 9⅛	2,640	9.2
4½ x 6	384	1.2
5¼ x 7⅝	935	3.7
5½ x 8½	356	1.1
6 x 9⅛	5,782	20.7
7¾ x 10⅝	2,597	9.2
8½ x 11	3,592	12.8
9¼ x 12⅛	870	3.4
7 x 10	846	3.3
Other	3,271	11.7
Total Quantity	27,779	100.0

In classifying these pieces of printing into the ten group sizes shown, the committee included in each group, sizes that varied from ⅛" to ⅜" in either or both dimensions. It will be seen from the list on page 59 that in each of these group sizes several variations

Economical Page Sizes

In the following tables are shown some of the page sizes (untrimmed) recommended by the Committee on Simplification of Paper Sizes appointed by the Bureau of Standards. The most popular are shown in boldface. In books or booklets the sizes shown must be reduced $\frac{1}{8}''$ to $\frac{1}{4}''$ in width and $\frac{1}{4}''$ to $\frac{1}{2}''$ in height to allow for trimming.

General Printing, Publishing and Book Publishing
(Single-sheet forms, folders, booklets and books)

Page Size	Number of Pages	Page Size	Number of Pages
$2\frac{3}{8} \times 6\frac{1}{4}$	2, 4, 8, 16, 32	$4\frac{3}{4} \times 6\frac{1}{4}$	2, 4, 8, 16, 32
$2\frac{1}{2} \times 6\frac{3}{4}$	2, 6, 12, 24	$4\frac{3}{4} \times 8\frac{9}{16}$	2, 6, 12, 24
$3\frac{1}{8} \times 4\frac{1}{8}$	2, 6, 12, 24	$5\frac{1}{8} \times 7\frac{5}{8}$	2, 4, 8, 16, 32
$3\frac{1}{8} \times 4\frac{3}{4}$	2, 4, 8, 16, 32	$5\frac{1}{2} \times 8$	2, 4, 8, 16, 32
$3\frac{1}{8} \times 6\frac{1}{4}$	2, 4, 6, 8, 12, 16, 24	$5\frac{1}{2} \times 10\frac{5}{8}$	2, 6, 12, 24
$3\frac{3}{8} \times 5\frac{1}{16}$	2, 6, 12, 24	$6\frac{1}{4} \times 9\frac{1}{2}$	2, 4, 8, 16, 32
$3\frac{3}{8} \times 7\frac{5}{8}$	2, 6, 12, 24	$6\frac{1}{4} \times 12\frac{5}{8}$	2, 6, 12, 24
$3\frac{5}{8} \times 4$	2, 4, 8, 16, 32	$6\frac{13}{16} \times 15\frac{1}{4}$	2, 6, 12, 24
$3\frac{5}{8} \times 5\frac{5}{16}$	2, 6, 12, 24	$7\frac{5}{8} \times 10\frac{1}{4}$	2, 4, 8, 16, 32
$3\frac{3}{4} \times 6\frac{3}{4}$	2, 4, 6, 8, 12, 16, 24	$7\frac{5}{8} \times 13\frac{5}{8}$	2, 6, 12, 24
$3\frac{13}{16} \times 5\frac{1}{8}$	2, 4, 8, 16, 32	8×11	2, 4, 8, 16, 32
$4 \times 4\frac{7}{8}$	2, 6, 12, 24	$8 \times 14\frac{5}{8}$	2, 6, 12, 24
$4 \times 5\frac{1}{2}$	2, 4, 8, 16, 32	$9\frac{1}{2} \times 12\frac{1}{2}$	2, 4, 8, 16, 32
$4 \times 7\frac{1}{2}$	2, 4, 8, 16, 24	$10\frac{1}{4} \times 15\frac{1}{4}$	2, 4, 8, 16
$4\frac{1}{8} \times 9\frac{1}{8}$	2, 4, 6, 8, 12, 16, 24	11×16	2, 4, 8, 16

Forms and Letterheads
(Single-sheet forms)

$2\frac{1}{8} \times 5\frac{1}{2}$	$3\frac{3}{8} \times 7$	$4\frac{1}{4} \times 14$	$5\frac{5}{8} \times 11$	$8 \times 9\frac{1}{2}$
$2\frac{1}{8} \times 7$	$3\frac{3}{8} \times 9\frac{1}{2}$	$4\frac{3}{8} \times 5\frac{5}{8}$	$5\frac{5}{8} \times 14$	$8 \times 12\frac{5}{8}$
$2\frac{3}{8} \times 6$	$3\frac{1}{2} \times 4\frac{1}{4}$	$4\frac{3}{8} \times 8\frac{1}{2}$	$6 \times 7\frac{1}{2}$	8×19
$2\frac{3}{8} \times 7$	$3\frac{1}{2} \times 8\frac{1}{2}$	$4\frac{5}{8} \times 5\frac{5}{8}$	$6 \times 9\frac{1}{2}$	$8\frac{1}{2} \times 11$
$2\frac{5}{8} \times 6$	$3\frac{3}{4} \times 6$	$4\frac{5}{8} \times 8\frac{1}{2}$	6×19	$8\frac{1}{2} \times 14$
$2\frac{3}{4} \times 4\frac{1}{4}$	$3\frac{3}{4} \times 8$	$4\frac{3}{4} \times 6$	$6\frac{3}{4} \times 7$	$9\frac{1}{2} \times 12$
$2\frac{3}{4} \times 8\frac{1}{2}$	$4 \times 6\frac{5}{16}$	$4\frac{3}{4} \times 8$	$6\frac{3}{4} \times 11$	11×17
$3 \times 4\frac{3}{4}$	$4 \times 8\frac{1}{2}$	$4\frac{3}{4} \times 9\frac{1}{2}$	$6\frac{3}{4} \times 14$	12×19
$3 \times 9\frac{1}{2}$	$4 \times 9\frac{1}{2}$	$4\frac{3}{4} \times 12$	$7 \times 8\frac{1}{2}$	14×17
$3\frac{1}{8} \times 4\frac{1}{4}$	$4\frac{1}{4} \times 4\frac{5}{8}$	$5\frac{1}{2} \times 6\frac{3}{4}$	7×17	17×22
$3\frac{1}{8} \times 8\frac{1}{2}$	$4\frac{1}{4} \times 5\frac{1}{2}$	$5\frac{1}{2} \times 8\frac{1}{2}$	$7\frac{1}{2} \times 8$	17×28
$3\frac{3}{8} \times 5\frac{1}{2}$	$4\frac{1}{4} \times 7$	$5\frac{1}{2} \times 11\frac{5}{16}$	$7\frac{1}{2} \times 12$	19×24

are still possible even though the paper used be confined to one of the standard sizes.

Should you fail to find in the list of sizes on page 57 an individual size to coincide exactly with each of these size groups, it is only because the committee disregarded the small fraction of $\frac{1}{8}''$ to $\frac{1}{2}''$ by which the trimmed and untrimmed dimensions sometimes differ. The point of greatest significance, however, is that of the 27,779 actual pieces of printing examined, 24,508, or 88.3 per cent, could have been cut without waste from the paper sizes recommended by the committee for adoption as standard. At the same time, careful inquiry among the users of the remaining 11.7 per cent, which comprised odd sizes, failed to bring out any essential reason for the odd sizes or any serious objection to changing them, when reprinted, to standard sizes.

Some Advantages of Standardization

Primarily, when the printed piece can be cut from stock paper sheets without waste, the total amount of paper required may easily be 10 per cent less than when this factor is disregarded and part of the paper must be wasted because it does not "come out even."

With a sufficiently diverse assortment of sizes to select from, this question, of course, would be of little importance. But excessive diversity in paper sizes increases the cost of doing business, for both the manufacturer and distributor of paper, just as excessive size diversification leads to needless waste in any other industry.

A statement on this general subject by the Honorable Herbert Hoover follows:

> Today, dozens of different sizes, styles, types and patterns of the most commonplace articles are placed in the market by manufacturers who must possess special equipment and skill to produce endless variations.
>
> Merchants accumulate great stocks which turn but slowly because of the excessive diversity and lack of interchangeability in their components. . . .
>
> The saving . . . as demonstrated by many well-known examples of simplification and standardization, runs into millions of dollars. There is a great area still untouched, in which the application of these waste eliminating measures may well save, not millions, but billions.

Since paper is the largest material item in printing, it is clear that any reduction in paper costs means lower prices for printing. In so far as users of printing standardize and simplify sizes, they contribute to these lower costs.

Specific Standardization and Simplification

Bank Printing

$3\frac{3}{8}$ x $8\frac{3}{8}$ inches for the following instruments

Bank Drafts	Certificates of Deposit
Collateral Notes	Special or Individual Checks
Cashiers' Checks	Trade Acceptances
Notes	Voucher Checks
Customers' Drafts	Special Notes (when folded)

Other Similar Instruments

$3\frac{3}{8}$ x $6\frac{7}{8}$ or multiples of $6\frac{7}{8}$ inches for Deposit Slips

$3\frac{1}{16}$ x $8\frac{1}{4}$ inches for Customers' and Counter Checks

$2\frac{3}{4}$ x $6\frac{1}{4}$ inches for Pocket Checks

Warehouse Printing

$8\frac{1}{2}$ x 11 inches for the following forms

Rate Quotation	Over, Short, and Damage Report
Bill of Lading	Receipts, Negotiable and Non-Negotiable
Invoice	Notice of Order Filled
Packing Ticket	Storage Order and Agreement
Tally Sheet	Goods Added to Storage
Delivery Sheet	Account of Stock

$3\frac{7}{8}$ x $6\frac{3}{8}$ inches for Signature and Identification Card

General Printing

For invoices, orders and inquiries, a width of $8\frac{1}{2}$ inches and a length or height of 7, 11 or 14 inches.

For catalogs, $7\frac{3}{4}$ x $10\frac{5}{8}$

But there are still further advantages in adhering to standard sizes. One of them is that the standard paper sizes correspond closely to the standard sizes of printing presses and other equipment. Their use thus serves to reduce the cost of printing, by making it possible more nearly to utilize the full area of the press bed, and the full capacity of cutters, folders and other equipment.

Each of these items requires the same amount of power and labor whether its capacity is fully utilized or not. Standard sizes make it possible to utilize them more nearly to capacity. Greater economy results, just as a manufacturing plant secures a lower unit cost in proportion as it approaches capacity operation.

A still further advantage lies in the greater certainty of securing a page shape and contour which is most convenient and conducive to legibility. In most printing, with the chief exception of certain office forms where a different set of factors must be considered, a page approximately 40 per cent higher than wide is best. Such a page is easiest to hold in the hand and to read from.

A further advantage is that a page of this shape may be cut in half or doubled in size and still retain approximately the same dimensions. This geometric property is useful in the imposing and folding operations if various sizes are to be cut without waste from standard sheets and freak dimensions avoided.

While the dimensions of the standard sizes do not in all cases coincide exactly with a height 40 per cent greater than width, yet they approach that dimension closely enough for most practical purposes; and their use automatically insures a desirable dimension.

When a standard size is selected, it is perhaps needless to add that stock envelopes of suitable sizes are available, and that stock filing cabinets or other furniture of suitable size are also available.

Some Specific Standards

Movements are under way toward standardization of specific kinds of printing in general use. Already definite progress has been made.

In the banking field, joint action of bankers, lithographers, and others has resulted in recommendations for standardizing bank

The Three Fundamental Patterns
of Printed Matter

All printed matter falls into one of these three classifications. Primarily the amount of manuscript and the size and number of illustrations determine the choice.

The Single Sheet

A *two-page form, one page on each side.* It may or may not be folded for convenience in distribution.

Examples are letterheads, post cards, admission tickets, orders, invoices, etc.

The Folder

A *form of four pages or more folded so that each face constitutes one page.* Four and six page folders are commonest. Although more pages are sometimes used, it is usually better to change to a book when more than six pages would be required.

A *leaflet* is a small folder (pages 4 x 9 or smaller).

A *broadside* is a large folder (unfolded size 11 x 17 or larger), one entire side of which constitutes one page, while the other side contains two pages or more.

The Book

A *form of two four-page folders or more bound together at the fold.* It may or may not be incased in a cover of heavier or more durable material.

A *booklet* is a small book (of 24 pages or less). By usage the term *pamphlet* has become synonymous with *booklet*.

A *brochure* is a de luxe booklet.

printing which have been adopted by the American Bankers Association and many other related societies, institutes and associations.

In the public warehouse industry, standardization of receipts and other common forms has been accomplished. The National Association of Purchasing Agents has formulated and secured widespread adoption of various kinds of printing of general application.

A summary of these specific standards appears on page 61.

The Pattern

After determining what the page size shall be, the next question to be answered is what pattern to adopt—a single sheet, a folder or a book. All printing is a variation of one of these fundamental patterns, which are summarized on page 63.

This question of pattern logically comes among the first because it is much easier to select type, illustration, etc., to fit a given pattern than vice versa.

Generally speaking, the question of the pattern to use is simply a matter of how much space the manuscript and the illustrations are likely to require. In this connection, there is a simple but sound rule which will quickly give the answer in the normal case.

First, reduce the manuscript, including display heads, and the illustrations, to square inches. Refer to *Computing the Space Required*, page 114, and to the first table on page 65.

The single sheet form is obviously desirable only when the square inch type-page area is small.

The largest convenient average size, excepting commercial forms, is in the neighborhood of 6 x 9. This does not mean, of course, that this is always the best size or that it should be slavishly followed; it is merely the most convenient and most extensively used of the larger page sizes in single-sheet forms.

Such a page has an area of 54 square inches. Since margins require, on an average, 40 per cent of the area of the paper, the other 60 per cent, or 32 square inches, may safely be considered as our available printing area on each side of the paper, or 64 square inches on both sides. So, if our material figures out as requiring 64 square inches or less, we may decide upon the single-sheet form.

A Simple Check List
for Selecting the Pattern

Approximate Number of Words in a Square Inch

Type	Words	Type	Words
6-point, leaded 2 pts.	34	10-point, solid	21
6-point, solid	47	11-point, leaded 2 pts.	14
7-point, leaded 2 pts.	27	11-point, solid	17
7-point, solid	38	12-point, leaded 2 pts.	11
8-point, leaded 2 pts.	23	12-point, solid	14
8-point, solid	32	14-point, leaded 2 pts.	9
9-point, leaded 2 pts.	21	14-point, solid	11
9-point, solid	28	18-point, leaded 2 pts.	6
10-point, leaded 2 pts.	16	18-point, solid	7

Column Widths for Easy Reading

6-point	columns from $1\frac{1}{2}$ to $2\frac{3}{4}$ inches wide
8-point	columns from 2 to $3\frac{5}{8}$ inches wide
10-point	columns from $2\frac{1}{2}$ to $4\frac{5}{8}$ inches wide
12-point	columns from $3\frac{1}{2}$ to $5\frac{3}{4}$ inches wide
14-point	columns from 4 to 7 inches wide
18-point	columns from 5 to $8\frac{3}{8}$ inches wide

Leading Between Lines for Easy Reading

6-point	should be leaded	1 or 2 points
8-point	should be leaded	1 to 3 points
10-point	should be leaded	1 to 3 points
12-point	should be leaded	2 to 4 points
14-point	should be leaded	2 to 5 points
18-point	should be leaded	3 to 6 points

NOTE: All these data are subject to variation from one type face to another and from all caps to upper and lower case in the same face, so, as a final precaution, consult your printer.

With material requiring over 64 square inches, the advantage of a folder over a single sheet becomes more and more definite. As already mentioned, 6 x 9 need not be considered as the limit in size. We may, indeed, use a single sheet form twice as large—9 x 12—on which may be printed about 130 square inches of material.

But before deciding upon so large a single-sheet form, it is well to consider whether the material might not be more conveniently arranged for two pages on each side of the sheet instead of one, so that when folded we have a four-page folder.

As a matter of fact, the $3\frac{1}{2}$ x $6\frac{1}{4}$ group size was found by the committee on simplification of sizes to be the most extensively used of all sizes. Perhaps this is because it fits the standard sized envelopes used in daily business correspondence. A four-page folder of this size contains a total paper area of about 90 square inches and a printing area of about 45 square inches.

From this to a four-page folder 9 x 12, containing a paper area of 432 square inches and a printing area of about 260 square inches, we cover the average range of usefulness of the folder. The broadside is often larger, but it is primarily intended, as its name applies, to provide a large display area, rather than to provide the space needed for the more usual typographical arrangement.

Even with the exception of broadsides the 9 x 12 four-page folder by no means marks more than the average limit in folder sizes. From the table of standard sizes it will be seen that larger pages are readily possible. Six pages, eight pages, and, in the so-called accordion style of folding, as many as 32 pages may be used in folders.

Anything beyond four pages, however, as well as freak folds (which are particularly to be deplored), tend toward inconvenience and a violation of logical order and sequence. Beyond this point, a book is ordinarily the most desirable form.

When the Requirements Are Exceptional

These are suggestions rather than ironclad rules. In most cases they will prove a safe guide and serve to prevent costly errors; but there are exceptions.

For example, in the cloak and suit industry it is often desirable to describe and illustrate several different models so as to bring out the

individuality of each and enable the reader to make comparisons readily. One useful expedient is to use illustrations of uniform size. This could easily be done in a booklet of appropriate size, using full-page illustrations in each case.

But in a booklet we see only two pages at a time; hence comparisons are difficult. So, in such a case, the most useful pattern is one of the varieties of accordion folders which would make it possible to place the various models side by side. The same is true of illustrations of an engineering subject, each emphasizing one feature. Wherever the element of simultaneous display is of greater importance than order or sequence, a multipage folder may be preferable to the booklet or book.

There may be times in your own work when the requirements apparently demand a "freak" pattern. That is an occasion for calling in a good printer. He may be able to suggest a way to serve the purpose and still avoid the pitfall of freakishness.

Consult Your Printer

In addition to the occasional exception, there are certain variable factors which need to be considered, and which further suggest the value of a good printer's counsel.

In various faces of type the average number of words in a square inch, and the leading between lines for easy reading, are subject to variations. In some faces, letters in the same nominal size are wider than in other faces. Some faces have longer descending strokes in such letters as g, j, p, q and y than have other faces, and this has the same effect without interline leading that in other faces would require leading.

Depending on the way they are mounted, some engravings require wider margins from adjacent type than others.

It is best, therefore, to consult your printer and thereby be certain you are right before going ahead.

CHAPTER VIII

The Essentials of Good Printing

Was It Good Printing?

Two men sat in the reading room of their club. From the amply stocked table nearby each had selected a current issue of a magazine, which he was idly leafing through.

Suddenly, one of the men stopped, his attention arrested by the page he had just turned. He gazed at it quietly for a moment, then showed it to his companion.

"That's what I call a real ad," said he.

It was a full-page advertisement, of which most of the space was occupied by a beautiful illustration of the drawing room of a fine home. In gorgeous colors it depicted the splendor of old tapestry, period furniture, modern lighting fixtures, and other furnishings, and the smartness of its occupants, who were in evening dress. Comfort, luxury, fashion—all were sumptuously portrayed. It was the kind of scene which many men secretly visualize as marking the kind of home they hope some day to establish for themselves and their families.

His companion "took in" these impressions and agreed. Then he launched into a description of a friend's home which he had recently visited. Gradually the conversation broadened and drifted into other topics. The periodical whose advertisement had prompted it was forgotten.

Then during a pause, one of them asked, "By the way, what firm ran that fine advertisement, and what does it manufacturer?"

"Why, I didn't notice," replied the other.

What Is Good Printing?

What is to be said of the printing represented by that advertisement? Is it to be considered as good printing?

The answer depends on what we conceive good printing to be. Judging by purely artistic standards our answer might be yes. Judged by business standards our answer must be no.

There are certain kinds of printing, of course, notably reproduc-

tions of paintings, etchings, and drawings by old masters, or editions of great poets and essayists, in which the artistic considerations outweigh the utilitarian.

Printing in business, however, is a utility pure and simple. It is good printing only in proportion as it serves its money-making or money-saving purpose. Good business printing may at times be artistic printing; but artistic effects are of value only in so far as they contribute to its rightful purpose. Beyond this they are a needless expense. When they are slighted, the printing likewise is needlessly expensive because it yields inadequate results in proportion to its cost. In business, good printing is *profitable* printing.

The materials and processes of the printing art should not attract attention to themselves or to irrelevant things as did the beautiful but ineffective advertisement. In sales printing, we do not want the recipient to say "That's fine printing" but instead "That's something I want to buy." In operating printing, we want the user to be impressed, not by any features of the printing, as such, but by its convenience in facilitating his work.

Of the contributory qualities of good printing, the most important are:

1. Legibility
2. Distinctiveness
3. Suggestiveness
4. Suitability to Usage
5. Longevity

It is to be observed that the first three are psychological, and the last two physical.

Legibility

That any printing must be legible is so obvious that there would be no point in even mentioning it were it not that printing often falls far short of legibility by reason of a lack of understanding, on the one hand, of the multiple factors which affect the reader's reception, attention, and comprehension, and, on the other hand, of the full possibilities and limitations of the materials and processes of the printing art.

In securing legibility, the guiding principles are (1) simplicity, (2) harmony, and (3) emphasis.

Simplicity is a matter of talking to the least educated of the readers instead of to the most educated, so that all will comprehend. It is a matter also of avoiding distractions to the attention.

Harmony is a matter of avoiding anything which consciously or unconsciously "jars" upon the reader's attention or sensibility.

Emphasis is a matter of arrangement and display so that the important features of the printing's message are given corresponding prominence.

All these are principles of ready transmission of thought. They apply equally to written composition and to illustrations. They apply to printing because it is the medium by which the thought expressed in either is reduced to "black and white" for transmission by way of the eye.

Legibility is directly governed by typography, illustration, and paper, and indirectly by the methods of binding.

Distinctiveness

Distinctiveness is a matter of recognition and identification.

Letterheads, packages, trade-marks, labels, and the like, are the kinds of printing in which this quality is ordinarily most valuable.

A business which has established a favorable reputation can capitalize upon it by means of distinctive printing so that the public will more readily associate with its products or its name the feeling of good will that its reputation inspires.

It is well worth emphasizing, however, that true distinctiveness comes from a legible style *consistently followed* and not from an unusual or outré style. True distinctiveness must be established by continued and repeated use exactly as time is necessary to the establishment of a favorable business reputation. Mere freakishness is not true distinctiveness; actually, it is a hindrance to legibility.

Typography, illustration, paper, and binding, all may contribute to distinctiveness.

Suggestiveness

Of the impressions we desire our printing to make upon the reader, many may be more effectively suggested than asserted.

70

Quality in a high-priced product, beauty in housefurnishings, reliability in a financial institution, durability in shoe leather—these and numberless similar impressions may be made by suggestion.

Suggestion is accomplished most readily with illustration and color, and, to a smaller extent, by typography, paper and binding.

Suitability to Usage

By usage we mean physical handling and not the use of printing as a means of securing business results. Nevertheless the printing must withstand folding, tearing, bursting and sometimes other forms of destructive usage if it is to secure its intended business results.

Resistance to usage depends chiefly on the paper and binding.

Longevity

Some printing serves its purpose if it reaches its audience, is read once, and is then discarded. Other printing must endure for a considerable length of time. State documents and bonds sometimes must be printed so that they may last for a century or more.

Longevity depends chiefly on the paper and binding.

The Choice of Materials

It is by our choice of the materials of the printing art—typography, illustrations, color, paper, and binding—that good printing is secured.

In choosing from these materials we must, of course, keep in mind the printing processes by which the printing will be produced. This is necessary if we are to plan economically.

In the chapters immediately following we shall consider the uses of typography, illustration, color, paper, and binding in the planning of good printing as defined in this chapter.

CHAPTER IX
The Typography

The Basic Type Faces

As a servant of business, printing provides a rapid means of setting down facts, opinions, and matters of record. Before the art of printing was originated, writing naturally had to be done by hand. Conversely, the type first used in printing, from which present-day type faces have evolved, had its origin in the kinds of handwriting which preceded it.

Prior to the origin of typography much of the writing of books was done by medieval monks; and the books themselves were largely ecclesiastical in character.

One of the first books to be printed was the Gutenburg Bible; and the type for it was fashioned after these monastic writings. This type, known as *Text* or *Black Letter*, and also, with certain variations, as *Old English,* constitutes one of the four basic faces of type.

Another kind of writing which preceded the origin of typography was the carved inscriptions in ancient Roman architecture. Type fashioned from this Roman lettering originated a few years later; and is known universally as *Roman.*

From the Roman face have sprung two variations: the *Block* (miscalled *Gothic* by printers) without serifs and with all strokes of equal width, and the *Italic*, the chief characteristic of which is slanting instead of vertical letters.

The four basic faces of type, therefore, of which all those now in use are but variations, are:

1. 𝕿𝖊𝖝𝖙 or 𝕭𝖑𝖆𝖈𝖐 𝕷𝖊𝖙𝖙𝖊𝖗, known also as 𝕺𝖑𝖉 𝕰𝖓𝖌𝖑𝖎𝖘𝖍
2. Roman
3. **Block** or **Gothic**
4. *Italic*

The Spread of Roman Faces

It is interesting and significant that although the Text Letter face was the original, it never attained the universal use which Roman did.

It carries with it the suggestion of antiquity and ecclesiasticism; and for that reason is still used occasionally for title pages of historical books, church programs, and similar printing. But following the origin of the Roman face, it never again prevailed for general use in Europe. In America it never came into more than occasional, limited use. The rapid spread of printing in Europe, and later in America, was accompanied almost entirely by the use of Roman faces.

Gothic also never attained more than a limited usage, while Italic has long been used chiefly as an accompaniment of a corresponding Roman face.

The reason is simple. Roman type best meets the most important requirement of all type—*legibility*.

Legibility, the Prime Essential

Type should not attract attention to itself. It should not be bizarre. It should not be ugly or otherwise obtrude any jarring note upon the attention of the reader. So far as practicable, it should reflect the character of the firm issuing the printing and the qualities of its product or service. But all these, and any other factors worth considering, are important only because they directly and indirectly affect legibility.

Legibility is the one final standard by which good typography is to be judged.

Without attempting to discuss the reasons why, the fact remains that Roman faces are the most legible faces. It is therefore with Roman faces that we are chiefly concerned.

The chief uses of Text Letter and Italic faces have already been mentioned. The chief use of the Block or Gothic face is in commercial forms or other work where space is limited. The plain capitals of this face are usually the most legible when space requires the use of an extremely small size. It actually is often used in other ways; but this is the only important use in which it excels Roman.

What Roman Face?

To delve again into the history of typography, it is interesting to observe that the latter part of the nineteenth century was marked

by the design of new varieties of Roman faces in almost endless profusion.

For some reason it was considered quite "elegant" back in the 70's to "come out" with a new face or to use on the same page a dozen or more different faces.

Typography suffered by sheer variety of type faces. Type founders' specimen books became as thick as unabridged dictionaries.

One cannot help being struck with the heterogeneous and hard-to-read typography of books or periodicals printed in the neighborhood of 1870 to 1885 when compared with the simple and legible typography which prevailed at the beginning of the nineteenth century and which again prevails today.

All of which leads us to *simplicity* as one of the essentials of a legible type page. Even today there are available many more varieties of type than there is any need of. This very profusion of available faces is a snare which the user of printing will carefully avoid if he would always buy printing profitably. Too often an unusual type face has been sought with the mistaken idea that its use assures distinctiveness, when in reality freakishness has been the only result.

True, different faces have individual uses for individual occasions; and it is worth while to make use of these variations, since they are available. At the same time, a few of the better available faces, such as are reproduced on page 77, provide all the variety that is of any essential use.

Stick to One Face on Each Order

The only reason for considering more than one type face is that different faces have usefulness under varying conditions. Different styles of engravings necessitate variety in paper, which, in turn, calls for variety in type. There is a certain value also in being able to select a face which may be indirectly expressive of the purpose of the printing or the character of the firm which issues it.

On any one order, however, it is invariably best to stick to one single face, or, at the most, to two related faces if the face selected for the body is not a good display face. The reason is that we thereby secure harmony and avoid any discordant or clashing note which

How to Buy Printing Profitably

A MANUAL OF PRACTICAL SUGGESTIONS
FOR THE BUSY BUYER

Collected from the
Experiences and Files of the Members of the
New York Employing Printers Association

Together with Numerous
Rules for Designing and Preparing Printing
for Maximum Effectiveness, Suitability
to Purpose, and Economy of
Production

ILLUSTRATED WITH NUMEROUS EXAMPLES
OF GOOD AND BAD METHODS OF PLANNING, BUYING AND
USING PRINTING. INCLUDING A DISCUSSION
OF PRINTING PROCESSES AND MATERIALS

Edited by
JOHN CLYDE OSWALD

Managing Director

THE NEW YORK EMPLOYING PRINTERS ASSOCIATION

1927

Had this book been published back in the 70's, its title page would have looked something like this. Compare with the title page in the front.

impairs legibility. Such a violation of harmony, like any other violation of the principles of good typography, is seldom noticed *as such* by the reader of the printing. If the printing appears uninteresting, he may just not read it. He could not analyze his mental impressions and processes, and tell you why. He might *think* it was because the subject itself did not interest him.

Headings and Emphasis

To emphasize divisions of thought or important ideas, headings and a type differing in some way from the main body of type are useful. Even here, however, there is no necessity for the use of a different type face.

The same face offers ample variety for conspicuous headings of graduated prominence and for the emphasis of words, phrases, sentences or paragraphs.

These variations are:

1. **Type strength. The bold letters of most faces are enough heavier to stand out from the ordinary letters.**

2. *Italics*

3. Type size.   Either larger or smaller type stands out

4. Leading. Lines leaded either more or less than the other lines stand out from them.

5. Indentation

6. Borders or lines

7. ALL CAPITALS

8. Capitals and small capitals

9. Underscoring

10. Color

Surely, with all these possibilities for securing variation harmoniously, it is more and more evident that multiplicity in type faces serves no essential purpose!

Use a Good Roman Face
Like One of These

Caslon and *Caslon Italics*

Caslon is perhaps the most widely useful of all faces. The Declaration of Independence was printed in Caslon. Of the fifty best books of 1925, more than half were in Caslon. "When in doubt use Caslon" is always a safe axiom in type selection.

Scotch Roman and *Scotch Roman Italics*

A modernized Roman with heavier lines than Caslon.

Garamond and *Garamond Italics*

A somewhat ornate but nevertheless legible face, and hence useful where ornate qualities in the printing are desirable.

Goudy Bold and *Goudy Bold Italics*

One of the best bold faces.

Century and *Century Italics*

A severely plain face expressly for legibility. Useful wherever any tendency toward ornament should be avoided.

Bodoni and *Bodoni Italics*

One of the heavier modern faces with serifs that are horizontal instead of slanting.

Kennerly and *Kennerly Italics*

A face suggesting antiquity by close conformity to original Roman stone-carved letters.

Cheltenham Bold and *Cheltenham Bold Italics*

One of the good heavier faces.

Cloister Bold and *Cloister Bold Italics*

Another of the good heavier faces.

French Oldstyle

A delicate Roman face, useful when a motif of delicacy, refinement, or similar quality is desirable.

Cooper Black

One of the heaviest faces, useful when extreme strength, massiveness or similar qualities are to be suggested.

It may be added that the essential of typographic emphasis is change. Type which stands out in a page is that which differs in some way from the remainder of the type. And so, the more emphasis we attempt, the less emphasis we secure. The more we use a *different* type, the more we make it the *same*. Excessive emphasis soon becomes no emphasis.

Choosing Type for Motif

To an extent, the character of the type face can subtly suggest qualities which it is desirable for the printing to suggest. It is sometimes possible to create and carry out a motif.

In sales printing, for example, it would be more appropriate to use a delicate face like French Oldstyle to describe delicate articles such as jewelry, and a heavy face like Cooper Black to describe heavy articles such as steam shovels, than vice versa.

It is in such extremes that this factor in type selection is most apparent. Between them is a vast range of subjects in which neither motif would be of value. This factor in type selection, although referred to prominently in most type books, is of minor importance and has led to much purposeless work in preparing printing.

Choosing Type for Distinctiveness

Type, however, has a certain distinctiveness by which the printing comes in time to be readily and familiarly recognized in connection with the firm issuing it. This follows much the same principle as that by which we quickly recognize familiar handwriting.

The principle of adopting one face for all outside printing and sticking to it is sound. It is of particular importance in the case of labels, packages and trade-marks where the element of ready recognition and identification has value.

It is to be observed, however, that such distinctiveness is a matter of consistently using the same type face—which may well be a face of known legibility such as one of those recommended in this chapter —rather than a matter of using an odd or "different" face.

In addition to the distinctiveness of trade and firm names themselves, even when set in the same faces used by competitors, margins, borders, spacing, and other details of arrangement allow wide oppor-

tunity for distinctiveness, even in purely descriptive parts of the printing.

Size Selection

Since a job of printing involves so many factors, the question of type size sometimes must be compromised. Ordinarily, however, it is possible, and it always is important, to select an easily legible size.

In the selection of schoolbooks, boards of education in this and other countries, aided by physical tests conducted by some of the leading universities, have determined the best type sizes with considerable definiteness.

These range from about 24-point* for the youngest school children down to 12-point for the oldest.

Based on these and other data, it is possible to consider 10-point as the best average size for adult easy-reading.

Where space permits, 12-point gives a slight gain in legibility. On the other hand, where space is limited, 8-point may be used without serious loss except in the case of persons of impaired eyesight. For commercial forms where space may be limited, for footnotes, or for other small masses of type, 6-point and even 5-point are available, but there are few cases, indeed, where they are justified for text pages, even on the ground of rigid economy.

Choosing Type Face for Type Size

Not all type faces are uniformly legible in all sizes. For this reason, after a size has been selected, it may be desirable for the sake of legibility to revise the type selection originally made.

This is most pronounced when the face needs to be small. The preceding paragraph, purposely set in Caslon 8-point to illustrate the point, is weak and hard to read in comparison with this paragraph, which is set in Cloister 8-point.

A paragraph set in French Oldstyle would give a still more striking contrast, in this size, to the Cloister. Goudy (not Goudy Bold) is a face which is usually too weak, even in a 10-point size.

Furthermore, some faces are excellent as body type but unsuited as display type, and vice versa. In general, the tabulation on page 80 will be helpful in this connection. It must be remembered, however, that it is subject to certain variations, depending upon the kind of paper used.

* A *point* is a unit of measurement applied to the height of the body of type; it is equal to 1/72 of an inch. Thus, the body of 12-point type is 1/6 in. high and that of 18-point is 1/4 in. high, and so on. However, the size of the letter itself varies from one face to another even on the same body. The text type used in this book is 11-point. Chapter headings are in 14-point; and paragraph headings are in 12-point.

Choosing Type Face for Type Size

Most type faces have different characteristics in different sizes; and these variations should be taken account of in selecting faces. For this purpose, the following classification will be helpful.

Faces Particularly Good for Display Type

(The following are set in 18-point)

Caslon Garamond **Goudy Bold**
Bodoni Century **Cheltenham Bold**
Cloister Kennerly Garamond Bold
Goudy Hand Tooled
Cooper Black

Faces Good for Both Display and Body Type
Not Smaller Than 10-Point

(The following are set in 10-point)

Caslon	Century	Cloister	Garamond
Bodoni	Cheltenham	Kennerly	Scotch Roman

Faces Particularly Good for Body Type
Smaller Than 10-Point

(The following are set in 8-point)

Bodoni	Century	Cheltenham	Goudy Bold	Garamond Bold

So we come back, here, to the same safe admonition that applies in so many other factors—consult a good printer.

Word Spacing, Leading and Column Width

Legibility depends also upon correct spacing between words, leading between lines, and column width in relation to the size of the face. In this paragraph, in which words have been widely spaced, it is easy to see how legibility has been impaired.

In this paragraph, with too wide a column in proportion to the size of type used, and in which there is no leading, it is easy to see how legibility has again been sacrificed. It is a little difficult for the eye to follow from the end of one line to the beginning of the next. And in following the same line from left to right, the words both above and below obtrude unnecessarily into the field of vision.

Generally speaking, words should be spaced approximately the width of one medium letter such as "e." The best general averages for column width and leading have been given in the chapter on Format. These factors have to be considered in deciding whether to use a smaller, one-column, larger-type page or a larger, two-column, smaller-type page.

The paragraph above has been set in Caslon 11-point, solid. This paragraph is set in Scotch Roman 11-point, leaded one point. Yet both paragraphs appear to be leaded about equally. The reason is that the descenders of the Caslon letters are longer so that the letters themselves give the effect of leading. As can be seen from the different faces shown on page 77, the length of descenders, as well as other dimensions, vary from one face to another.

With the exception of the illustrative paragraphs shown here, the text of this book is leaded one point between lines. You will observe, incidentally, that according to the table of average recommended leading between lines, given on page 65, type of this size should be leaded at least two points. The Scotch Roman face used in this book, however, happens to be an exception. In this paragraph, the lines are leaded six points in order to illustrate the result when leading is carried to extremes. As is readily seen, this does not directly impair legibility but it does so indirectly, in that if entire pages were so printed, a strange impression of incongruity would be produced.

This is because the extra leading unduly accentuates the fact that the type lines are horizontal, whereas the predominating dimension of the pages is vertical. It is a principle of architecture that in a building which is taller than it is broad, so that its predominating dimension is vertical, its "lines" formed by rows of windows or other details should also be predominantly vertical rather than horizontal.* The same principle of harmony in type pages contributes to effectiveness.

*See *Art and Practice of Typography*. Gress.

CHAPTER X
The Illustrations

Making the Explanation Clear

"Well, what did you find was the trouble?" asked the motorist whose car had been towed in the day before.

"It needs new bevel gears," replied the garageman, and he led the way to his workshop, where he exhibited three gears, one of which was broken.

"What's it going to cost?" the motorist asked.

"Well, let's see. The gears will cost about $25 and——"

"Gears! Why more than one gear? Only one is broken."

"Yes, but a new one will not mesh properly with the old ones."

"But can't you move them back a little?"

"Yes, I could move the drive gear back for the new one, but then it would be too far from the other worn one. That would be very dangerous and it wouldn't work to move the other one in too. No, there's no way than to get a complete set of these new gears."

"Maybe you're right, but I don't see why you can't move them and buy only one new gear."

"Here, I'll show you," said the garageman. He walked to his bench, the car owner following, and found a pencil and paper.

"Now, we're looking down at the car from the top," began the garageman. Then beginning to sketch roughly, he continued, "Here's the front. Here's the back. Here's your motor. Here's your drive shaft. And here's your differential. See?"

"Yes."

"All right. Now the drive gear is right here."

And in a minute, by drawing his rough sketch, he made everything clear to his customer where his verbal explanation had failed.

The Two Main Functions of Illustrations

The two main functions of illustrations are:

1. To explain and portray tangible objects.
2. To express intangible ideas by dramatizing them.

The garageman's sketch is an example of the first function.

One of the commonest examples of the second are the cartoons of current events appearing in newspapers. Nations, political parties, economic forces, and other ideas normally without tangible form in the mind of the man on the street are given life and interest by pictorial representation. Uncle Sam as the United States, John Bull as Great Britain, and the elephant and the mule as political parties are familiar actors in the dramatization of newspaper cartoons.

Both these functions, of course, can be performed by words in type. An illustration, however, can present at a glance what might otherwise take paragraphs to describe. Illustrations, therefore, make it possible to convey a message more quickly, to reduce the number of words, to lighten the mental effort required of the reader, and thus increase the effectiveness of printing.

Particularly in sales printing, where the reader's attention must be attracted and his interest aroused, this quality of illustrations, by reducing the natural resistance to mental exertion, is of first importance.

Another advantage of illustrations lies in the fact that the basis of memory is images, not words. "Yes, I recall your face, but your name has slipped my mind," is a common everyday expression.

A still further advantage is that objects may be pictured in an environment or "atmosphere" so as to suggest more quickly and subtly than by words, ideas as to their character and quality. For example, a picture of fine furniture in a room of a fine home suggests that it is the kind of furniture which owners of such homes are accustomed to buy. Because this idea is suggested instead of stated, it strikes the reader of the printing with the deeper conviction that we all hold toward that which we discover for ourselves.

The Growing Use of Illustrations

Experience amply proves the value of illustrations. Particularly conclusive is the experience of mail-order companies, since their

printing is their only source of sales. Such companies have repeatedly proved, beyond all shadow of doubt, that illustrated articles outsell others which are described only with words. An examination of present-day mail-order catalogs shows that the percentage of non-illustrated articles is negligible. The same is generally true also of other catalogs; but the mail-order practice is of greatest significance, since mail-order printing never divides the credit for results, or the blame for lack of results, with other methods of selling.

The use of illustrations in advertising has consistently increased during the past twenty-five years. Dr. H. D. Kitson of Columbia University has examined the advertising from 1895 to 1919 in *Literary Digest* and *Collier's Weekly*, and appearing from 1907 to 1923 in the *Indianapolis News* and *Bloomington* (Indiana) *World*.*

In the two magazines, the percentage of illustrated advertisements rose from about 25 per cent in 1895 to about 80 per cent in 1919. In the two newspapers the percentage rose from about 70 per cent in 1907 to nearly 90 per cent in 1923.

The Original

On page 89 is given a summary of the major types of original illustrations, the use to which each is best adapted, and the type of engraving by which each is best reproduced.

Of all methods of illustrating, the photograph provides the most accurate and realistic. It reproduces the shapes and the tone gradations of the original object exactly as they appear.

At the same time, it has its limitations. It is useless in interiors which cannot be lighted or in which it is impossible to place the camera at the angle and distance necessary to secure proper perspective. It is often difficult also to secure satisfactory photographs of objects which reflect light, such as glassware, shoes, automobiles, and the like. Usually, the reflections produce an unnatural muddiness or high-light flatness which obscures detail.

In all such cases the wash drawing, which may be merely a retouched photograph, is widely useful as a substitute. If carefully done it can be made a faithful reproduction of the original object and, like a photograph, may be given every tone gradation between white and black.

* *Scientific Advertising*, Kitson; New York, 1926.

In the illustration of engineering subjects, or any others in which accuracy is important, a wash drawing may be made with a blue print or an engineering drawing as a basis. So-called phantom views of interior mechanisms, impossible with photographs, may be produced accurately to scale in this way.

The wash drawing is of usefulness also in cases where it is desirable to give special prominence to a specific feature of the object illustrated. A bed-spring manufacturer, in order to make prominent the way he joins the wires together, might show a single enlarged connection as if under a magnifying glass.

The usefulness of the various types of line drawings lies chiefly in representing imaginary objects, or objects which have been altered from actuality in order to typify a desired motif in much the same way that the distinctive features of tangible objects may be given prominence by means of their treatment in wash drawings.

For example, in the cover design for a booklet describing motor trucks it may be useful to create a motif of strength, ruggedness or endurance—qualities desired by purchasers of motor trucks.

For this purpose a practical illustration would be a line drawing of a blacksmith, a lion or elephant, or a mythical figure, or anything which typifies or suggests these qualities. True, any of these objects could be photographed. But only in rare cases is it practicable to make a photograph sufficiently selective.

For example, suppose we decide to use a representation of Hercules. It would be possible, of course, to photograph a human model. But the photograph, unless it be retouched, would "take" all that is included in its focal range in addition to the object desired. Even in its representation of the desired object it would faithfully show those features that do not serve to depict the desired motif along with those that do. Still more important, however, would be the difficulty of finding a model sufficiently typical.

The artist, however, can quickly produce a Hercules with heavier and more pronounced muscles than they ever appeared in actuality. He may omit entirely other details that would be necessary in a true-to-life picture but which in this case would divide the attention.

Generally speaking, photographs and wash drawings are chiefly useful in the faithful explanation or portrayal of tangible objects;

while line drawings are chiefly useful in the expression, by dramatization, of intangible ideas. The main exceptions are engineering line drawings, and illustrations that cannot be readily or economically posed and photographed, or which do not warrant the expense of a wash drawing; line drawings are then used as an expedient.

Between the various kinds of line drawings little can be said except that the pen and ink variety is practically the only one of widespread usefulness in business. Of the others, the comparisons are chiefly in the field of artistic expression, which is outside the province of this book.

In cases where, as a matter of expediency, line drawings are used instead of photographs or wash drawings, it is possible to give various flat tones to different parts of the drawing by means of the so-called Ben Day Process. This consists of screens by which the artist may shade portions of the drawing with patterns much more accurately and quickly and at less expense than by hand.

Kinds of Illustrations in Advertising

An interesting and significant guide as to the relative usefulness of different types of illustrations lies in their relative prevalence in advertising, figures of which are now available.

Dr. Kitson, whose investigations have already been referred to, has made a study of the types of illustrations used in the advertising appearing in two typical periodicals from 1895 to 1920. The periodicals were *Literary Digest, Harper's Weekly*, from 1895 to 1916, and *Collier's Weekly*, from 1916 to 1920.

His examinations, made at five-year intervals, reveal the following:

Type of Illustration	Percentage of total in each year					
	1895	1900	1905	1910	1915	1920
Pencil Drawings	.7%	1.2%	3.0%	1.2%	.3%	2.1%
Pen and Ink Drawings	90.7%	63.8%	60.7%	42.7%	33.0%	21.5%
Wash Drawings	3.3%	17.2%	12.3%	27.0%	26.1%	30.3%
Photographs	4.6%	11.1%	12.9%	23.1%	14.9%	17.1%
Combinations	.3%	5.9%	8.6%	5.7%	25.2%	28.7%
Charcoal	.1%	.1%	.2%	.02%	.06%	.08%
Miscellaneous	.04%	.2%	.8%	.05%	.09%	.2%

The most significant trends are the decrease in pen and ink drawings and the increase in wash drawings, photographs, and combinations that usually include one of these two.

This reflects both an increased recognition of the superiority of photographs and wash drawings for portraying tangible objects faithfully—the most frequent use of illustrations in advertising—and the perfection of the half-tone process in photo-engraving by which reproduction of the graduated tones of wash drawings and photographs are made possible.

Photo mechanical process engraving, following its commercial perfection about 1860, was used entirely for reproducing line drawings. The half-tone process did not come into commercial use until shortly prior to 1890. In 1895, therefore, which marks the beginning of the period covered by Dr. Kitson's studies, half-tone engravings were still in their infancy.

The Major Types of Illustrations

The chief usefulness of each; the type of engraving to which each is adapted.

Kind of Illustration	Chief Usefulness	Kind of Engraving
Photograph	For accurate portrayal.	Half-tone, including four-color process.
Wash drawing	For retouching or reproducing photographs. For objects which do not photograph well or cannot be photographed.	Half-tone, including four-color process.
Line drawing by —pen —pencil —crayon or charcoal —stipple	For decorative, allegorical or imaginary objects. For expression of a motif.	Line engraving (when lines are pronounced and solid). Half-tone (when lines are not solid), including four-color process by shading or by tint blocks.
Painting	Of limited commercial use.	Half-tone, usually four-color process.
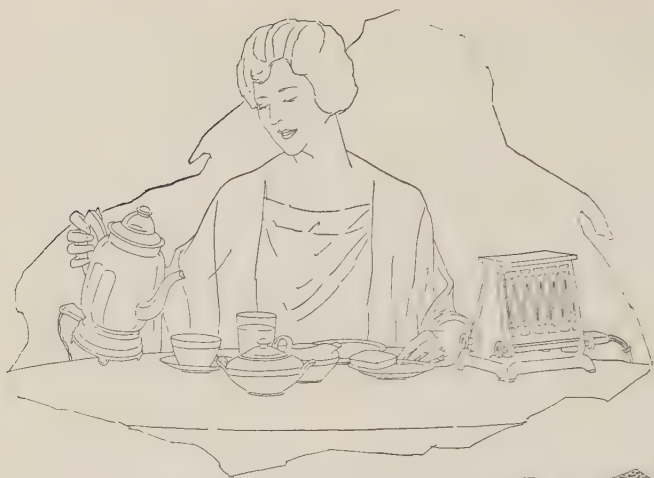
Pen and ink line
drawing reproduced
by line engraving

Pen and ink line
drawing shaded with
Ben Day screen, and
reproduced by line
engraving

Combination of pen
and ink line and
wash drawing repro-
duced by combina-
tion line and half-
tone engraving

Crayon drawing re-
produced by line
engraving

Photograph repro-
duced by half-tone
engraving

Wash drawing repro-
duced by high-light
half-tone engraving

91

Yellow   Yellow

Red   Yellow and Red

Black   Yellow Red and Black

Blue   Yellow Red Black and Blue

Example of Four Color Process
Engraving and Printing

CHAPTER XI
Color

Where to Use Color

Just as illustrations are a step ahead of words in speedily and accurately conveying meaning, so colored illustrations are a step ahead of those in black and white. Color adds value not alone to illustrations but to type pages as well. It is a factor also in paper and in materials used for binding.

Color in Illustrations

As in the case of evaluating illustrations in comparison to words alone, so the value of colored illustrations, compared to those reproduced only in black and white, may be most accurately determined from the experience and practice of mail-order companies.

To reproduce an illustration in the natural colors of the original costs from three to six times as much, depending on the number of primary colors required, as to reproduce it in black and white. Thus when reproduced in color, the illustrations, representing anywhere from 25 per cent to 75 per cent of the entire printing, will increase the final cost two to four times. Consequently the use of color in illustrations is profitable only when it increases the effectiveness by at least an equal ratio. For this reason, some of the early experiments with color conducted by mail-order companies are significant.

One of the larger mail-order companies printed one page in color in half of one edition of its catalog, and printed the identical page in black and white in the other half. The only change was in the catalog numbers assigned to the articles on this page so as to key the relative returns. Sales from the page in color were fifteen times the sale from the black and white page.

In that case, sufficient primary colors were used to reproduce the articles in actuality. In another case, the illustration was printed in plain black and white but surrounded by a colored background instead of the plain white space of the paper. The illustration with this colored background produced thirty times more sales than the same illustration with white-paper background in other catalogs. In this case, colors were not used to increase realism. It is likely that the

increase in sales resulted from the greater attention value of color and perhaps also, though to a smaller extent, to the fact that it was pleasing to the eye and thus impressed the reader with a greater desire to buy the article shown in its more pleasing surroundings or "atmosphere."

Further similar tests, almost without number, have been recorded in which the use of colored illustrations, in comparison with black and white, show a return varying from two to fifty times as great. To the best of our knowledge, there is no recorded instance in which color has failed to add some degree of effectiveness.

It is noteworthy, however, that there is considerable variation in the effectiveness added by color, and that it does not always equal the added cost. Under what conditions, then, is color profitable?

From an examination of the available data we may safely draw the following general conclusions. Color is most useful:

1. When the object itself is colored.
2. When color is a factor in appearance or salability.
3. When color may serve to give "atmosphere" in backgrounds or in surroundings.

A significant guide as to the effectiveness of color, in these three uses, is its growing use in mail-order catalogs and magazine advering. The percentage of colored pages to the total in mail-order catalogs has risen from less than 3 per cent in 1909 to more than 9 per cent in 1922. The percentage of colored advertisements to the total in national magazines has increased from 3 per cent in 1909 to 36 per cent in 1925.

Color in Type Printing

In speaking of color in type printing, we refer to an extra color besides the black, and not to the printing of an entire page in one color other than black—a practice of whose value no definite data are available. Compared to color in illustrations, color in type adds little to the cost, since the type is merely "broken up" for color and is not printed one impression over another as is the case with color plates for illustrations. When accompanied by colored illustrations, color in type printing is secured at little added cost.

Its usefulness in type printing is primarily that of attracting the reader's attention to the emphatic portions of the page. Secondarily, color "warms" the page and so provides a stronger invitation to a

reading on the part of a recipient whose initial interest cannot be taken for granted.

Color in Paper and Binding

In paper, color often makes possible the effect of two colors with only one color of ink, or the effect of three colors with only two colors of ink, and so on.

A more widespread use of varied colors in paper, however, is in connection with commercial forms and records. By printing duplicate copies in different colors, each is more readily identified and all those who use them in their daily work quickly become familiar with the purpose and destination of each. Time and possibility of error in transmitting them through the office mail, in mailing to customers, and in filing are thus materially reduced.

In covers and cover materials, color is useful chiefly because it attracts more attention than plain white and black, and, if wisely chosen, more favorable attention.

The Psychology of Color

We may further clarify the question of when and where to use color profitably by considering the normal psychological reactions to color. A study of color in nature, in art, and in the practical sciences yields the following conclusions which are helpful in considering the use of color in printing:

1. **Color Has Intrinsic Appeal.**

    It is inherently pleasing. For centuries, brightly colored beads have been used by explorers in bartering with savages. In highly competitive industries color is nearly always used wherever practicable as an additional sales feature. The recent departure from conventional black in automobile bodies has closely paralleled the increasing competition in that industry. Here color has no greater utility than black. Indeed, colored enamels are less durable than black. Yet color is useful because people like it.

    It is because of this characteristic of color that it is useful in covers, as backgrounds, in labels or packages, and elsewhere solely to obtain attractiveness and suggest desirability.

2. **Color Is Realistic.**

    This characteristic is obvious. When an object possesses color in actuality, it can be reproduced realistically only with color. In so far as printed matter is used, directly or indirectly, in selling such objects, it is bound to be more effective in color because the prospective purchaser can thus tell exactly how it looks. Seldom will he buy until he knows this.

3. Color Attracts Attention.

After a series of dull, cloudy days, the sun appears bright and full; and people greet one another with "Lovely day, isn't it?" After a winter of drab landscapes, a day comes in the spring when vegetation grows beautifully green seemingly overnight. Again people remark to each other how beautiful everything is. Later, to her green, nature adds brilliant reds, blues, and other colors as flowers bloom. On occasion the close of day brings a sunset of gorgeous hues. Each time the normal person's attention is attracted.

From the use of color by nature, much useful information to guide our use of it in printing is learned. This will be referred to under *Color Harmony* and *Color Restraint*. The important point here is that color, and particularly a change in color when manifested in nature, invariably attracts attention.

This characteristic of color is utilized similarly to its characteristic of intrinsic appeal. In addition it is used in type pages to attract the reader's attention to parts which should be emphasized.

4. Color Stimulates Memory.

As pointed out in the chapter on Illustrations, memory functions more readily with images than with words. And so, memory is stimulated when these images are given color. The customer who asks for "the one in the red package" is an ever-present example of the persistence of color memory after names are forgotten.

This characteristic of color is of chief usefulness in the reproduction of trademarks, packages, labels and other devices of identification.

A corollary to the memory value of color is its association value. In nature and in history, certain colors have become associated with certain things, so that in printing, the qualities these things represent may sometimes be suggested. For example, in nature, deep, clear waters and clear skies are blue; hence blue suggests cleanliness and coolness. Fire is red; hence red suggests heat, danger and destructiveness. In history, purple, from its use in royal robes, has come to be associated with richness. A background of deep-sea blue for an illustration of bathtubs subtly suggests cleanliness. Red is easily the best color for a warning. Purple similarly suggests richness when used as a background for gems. Such uses of color, however, are comparatively rare and of secondary importance in business printing.

The Physics of Color

White light is the source of all color; and hence all colors are to be found by analyzing white light into its spectrum as is done in nature by the rainbow and artificially by the prism.

When the spectrum is examined, it is found to begin with red and then to pass in imperceptible gradations through orange, yellow, green, blue, and purple, where it ends. If manipulated so as to be reproduced as a circle, the two ends may be joined without showing a more perceptible gradation than at any other point.

Yellow, red and blue appear at different points on this circular spectrum and may be used by admixture in varying proportions to produce any others. They are thus known as *primary* colors, and are the basis of the four-color (the fourth being the key plate to print in black) process by which completely lifelike reproduction is possible.

Any two diametrically opposite colors produce the greatest contrast; such colors are commonly spoken of as *complementary*.

White and black represent the presence or absence of light, intermediate gradations between the two being gray.

Any color in combination with white is *tinted* lighter; while in combination with black (or gray) it is *shaded* darker. So, just as there are infinite colors, there are also infinite tints and shades of colors. For example, canary is a tint of yellow, while tan is a shade of yellow.

Color Harmony

From these physical characteristics of color, the harmony of color is best understood. Just as in music certain combinations of tones produce discords, and others harmony, so in color both discordant and harmonious combinations are possible.

When reproducing a colored object, this question does not arise, but it does in type, drawings, backgrounds, and decorations.

There are four main principles of color harmony.

1. *Similarity:* Two adjacent* colors, like two adjacent notes in music, are discordant, while more than six would include the complementary of one and again be discordant. Harmony of similarity, therefore, is secured when not less than three nor more than six adjacent colors are used.

2. *Contrast:* Any two complementary colors are harmonious. Secondary, or compound, colors harmonize with their common complementaries which are their combined individual complementaries.

3. *Tonality:* A combination of colors may be harmonized by toning all of them with one.

4. *Monochromatism:* This consists of a single color combined with white and black to produce its tints and shades. This principle of harmony is thus analogous to that of tonality.

As is the case of the other principles of good printing, harmony or its lack are seldom noticed, as such, by the ordinary reader of the

---

* For convenience in discussion, the spectrum has been divided into twelve segments which have been named as follows: (1) red, (2) red-orange, (3) orange, (4) yellow-orange, (5) yellow, (6) yellow-green, (7) green, (8) blue-green, (9) blue, (10) blue-purple, (11) purple, and (12) red-purple.

printing. But it plays an important part in the effectiveness of the printing; and its four principles just given will prove a safe and convenient guide.*

In type, where legibility is paramount, contrast usually is best.

In drawings or decorations (including cover colors), either contrast or similarity may serve.

In all cases, we may learn from nature and her choice of color. There, the predominating color is dark or cold, such as green, while the bright color is confined to a minor spot, such as the sun, a waterfall, a flower, or the like.

Similarly, in a type page, white paper, black type and a minor spot of red type face are more harmonious and attention is drawn to the red with greater certainty then would be the case with white paper, red type, and a spot of black.

Incidentally, in choosing a second color to accompany black type on white paper, red is inevitably first choice. Of the other two primary colors, blue contrasts little with black, and yellow but little with white; while red contrasts equally with both.

Color Restraint

In addition to the usual predominance of darker colors in landscapes, the lighter colors, such as reds, oranges, or yellows, are usually either of ephemeral appearance or of limited area if their appearance is prolonged.

Seen thus they attract; seen immoderately they tire or become commonplace.

All this is particularly pertinent to the use of color for emphasis in type pages. Color remains emphasis only so long as its use is restrained. One spot of red on a type page attracts attention; many such spots confuse and the whole becomes commonplace. Color emphasis follows the same rule as other emphasis.

Color Processes

In type, color printing involves merely a removal from the original

* These principles of color harmony are subject to individual exceptions. A discussion of them would be outside the scope of this book; and the interested reader is referred to one of the available text-books on color.

forms of the letters or words to be printed in color and their spacing in the same positions on separate forms. This is commonly spoken of as "break up for color."

Line drawings, as such, cannot be reproduced by the four-color process. Various parts, however, may be given interspersed or super-imposed colors by means of properly proportioned tint blocks either flat or shaded, by the routing of separately engraved plates.

Photographs and wash drawings are the types of illustrations for which color processes have been brought to the highest perfection. By the so-called four-color process, reproduction of the utmost fidelity to the original can be secured.

First the illustration is colored as it is to appear when printed from the plates. Half-tone plates are then made in the manner which has already been described except that a color filter is used to filter out all rays except (1) the blues, (2) the reds, (3) the yellows, and (4) the blacks and grays.

After making each plate the screen is revolved from fifteen to thirty degrees, depending on the number of colors, in order that the dots from each will be interspersed rather than superimposed.

Comparable results may sometimes be secured with three colors, and at other times with two, depending, of course, upon the coloring of the original.

The Importance of the Printer

Nowhere is the advice as well as the craftsmanship of a good printer so profitable as in the execution of color printing. As already pointed out, such printing represents greater cost and possesses greater possibilities for effectiveness. It therefore warrants cor-respondingly careful planning and the employment of a printer equipped with mechanical facilities and personnel to cope success-fully with its complexities.

Such a printer can save you money in many ways. For example, although four colors are frequently necessary to secure lifelike reproduction, it is not always so. At times, the character of the originals is such that approximate and, for the purpose, adequate results are possible with only two colors. In such cases, however, the two printing colors might be of compound rather than primary hues and possibly with the one tinted and the other shaded.

It is clear that to recognize when such possibilities for economy exist, much less to gauge how to carry them out, is a task for the expert. A good color printer, however, has this expert knowledge and is ready to use it in your interest as a matter of ordinary business reciprocity.

As another example, in a booklet to contain four-color illustrations, it makes a material difference in the cost whether all these illustrations may be printed on one side of the large sheet from which the booklet is folded, or whether they are scattered on both sides.

This depends upon the method of folding, according to which the various pages are *imposed* for printing on the press. This in turn depends upon the page size, the page shape, and the number of pages, in all of which there are more permutations and combinations than it would be practicable to list and explain in this book. So we come again to our oft-repeated suggestion: consult a good printer.

Above all, it must be obvious that even in two-color printing, much less three and four, each impression must register precisely with the other. Otherwise we would have crazy-quilt printing. When we consider, too, that we are printing under pressure from unyielding metal to paper whose thickness is a matter of thousandths of an inch, we begin to realize the absolute necessity of employing a good printer.

CHAPTER XII

The Paper

The Basis of Selection

The importance of selecting paper for type, illustration, and color, instead of selecting these for a previously and hence arbitrarily selected paper, has already been mentioned.

In selecting papers, therefore, the point of greatest importance is a ready familiarity with the varieties available so that we may take full advantage of that variety and select economically the one which is best in each case.

As shown on page 107, there are always two major standpoints from which to select paper.

With an answer to the six questions listed, our choice automatically narrows down to a consideration of the minor variations available in one or, at the most, two species of paper.

Paper must always be selected from the standpoint of how it will print the type, illustrations, and color which have already been selected, and of how it will stand up under the use for which it is intended.

From the printing standpoint, we need not consider color in paper selection.

Quality in Paper

Paper is a felt made from cellulose or vegetable fibers derived from (1) cotton or linen rags and (2) wood.

The first process of paper manufacture is to separate these fibers from impurities; and upon the thoroughness with which this is done depends the quality of the finished paper. One of the lowest grades of paper is newsprint from which the impurities have not been thoroughly removed, as a result of which it discolors and grows brittle in a comparatively short time.

Paper quality depends also upon the length of the fibers. Since fibers derived from rags are longer than those derived from wood, rag papers are stronger than wood papers, just as long-staple cotton makes stronger fabric than short-staple. Paper from either has equal

65 Screen

85 Screen

100 Screen

120 Screen

133 Screen

150 Screen

The Printing Crafts Building
Illustrated in Different Half-tone Screens

This series of half-tones indicates how greater detail is obtained as finer screens are used. The coarsest, or 65-screen, half-tone may be used on paper as coarse as newsprint. Note, however, that it is necessary to use at least 120 or 133-screen half-tones before the screens themselves cease to be distinctly noticeable; while 150-screen half-tones give the best approach to reality and are worthy of more widespread use in business printing wherever accurate and lifelike portrayal are valuable.

Half-tone properly "made ready."

Half-tone not "made ready."

This contrast is a striking illustration of the necessity for adequate press-preparation time and of the frequent result of trying to produce a piece of printing in less than its natural minimum time. The time element in printing is discussed in Chapter XVI.

longevity as long as the removal of impurities has been equally thorough.

In actual paper manufacture, rag and wood pulps are often mixed in varying ratios, the quality thus depending upon the percentage of rag.

Generally speaking, bond, ledger, and writing papers, being used in commercial forms subject to considerable handling and hard usage, are of better quality than book papers which are used in sales printing and as a rule not subject to hard usage. This, however, is subject to variation, depending upon the practice of individual paper manufacturers.

How Paper Is Made

The manufacture of paper is a comparatively simple process despite the fact that it involves much heavy and complicated machinery.

The cellulose fibres, suspended in water, are poured upon an endless belt of fine wire screen through which the water drips off.

As the fibres dry they felt together; and the result is paper. In modern paper-making plants the movement of the screen is continuous, the pulp being applied at one end and paper taken from the other; which, after being more thoroughly dried, is passed onto rolls.

How fast the pulp is poured onto the moving screen determines the paper's thickness or weight.

A roller known as a *dandy roll* revolves upon the pulp while it is still wet and impresses at regular intervals the so-called *water-mark*.

The Main Varieties

When paper is made exactly as described above the result is *antique paper*.

Laid paper differs only in that a roll containing parallel wires is laid on the wet pulp, thus producing the *laid* marks in the same manner in which paper is water-marked.

Wove paper, by similar means, is marked to resemble the warp and weft of fabric.

Eggshell differs from antique only in that it is slightly smoother and less bulky.

These are the four main species of soft-surfaced book papers which, because they are highly absorbent, print type and line engravings to the best advantage.

When the paper is passed between calender rolls revolving faster than the paper moves, the surface is smoothed and partly polished; the result is *machine-finished* paper.

When the same process is further continued, *supercalendered* paper, commonly designated as "super," is the result. It is the glossiest and smoothest species of calendered papers.

Continued about the same length of time, but with the calender rolls moving only as fast as the paper, the result is *English-finished* paper. It is almost as smooth as supercalendered, but has no gloss.

These are the three main species of calendered papers.

When the paper is given the supercalendering process—having been previously coated with a mixture of China clay—the result is *glossy coated* paper, the glossiest and smoothest of all papers.

When coated but not calendered afterward, the result is *dull coated* paper.

These are the two main species of coated papers. All book papers belong to one of the four species of soft surfaced, the three species of hard surfaced calendered, or the two species of hard surfaced coated papers just mentioned.

Bond, ledger, and writing papers, generally speaking, are made from a better grade of fibres than book papers. The sheet is *sized* with a gelatinous mixture in order to reduce its absorption properties and adapt it to pencil and pen writing, and to use in the typewriter. Printing ink, being oily, does not "run"; hence the sizing is not as essential in the manufacture of paper from the standpoint of its printing qualities alone.

After being sized it is calendered in substantially the same way that has already been described as English finish. Variations in the calendering produce "grained," "pebbled," and "rippled" surfaces.

There is no essential difference between bonds and writings except that as a rule bonds are somewhat stronger.

Between bonds and ledgers, the chief difference is thickness. Ledgers are thicker in order to withstand possible erasures.

How to Select Paper

I. *From the standpoint of how it will print—the surface.*

    1. Is type alone, or type with line engravings only, to be used? If so, a *soft surface* is best.

    2. Are type and half-tones to be used? If so, a *hard surface* is best.

II. *From the standpoint of the use it will receive—the quality.*

    1. Must it last for years or is it to be read and then thrown away? If the former, *all-rag* is best; if the latter, *all-wood* is adequate.

    2. Must it serve for pen and ink writing or typewriting? If so, it must be *sized*.

    3. Must it withstand folding, tearing, twisting or other hard usage? If so, it must be *all-rag* or part rag. If not, it may be *all-wood*.

    4. Must it resist water or grease, be free from corrosive action, or meet other special conditions of use? If so, one of the specialty papers must be selected.

Paper Classified by Printing Surface

I. *Soft Surfaced (for type or line engravings)*

    1. Antique

    2. Eggshell

    3. Laid

    4. Wove.

II. *Hard Surfaced (for half-tones)*

    1. Calendered

        a. Machine finished

        b. English finished

        c. Supercalendered

    2. Coated

        a. Glossy coated

        b. Dull coated.

Printing Qualities

There are no essential differences among antique, eggshell, wove and laid papers. All are highly absorbent; and are best for type or line engravings, and poorest, practically impossible, for half-tones.

As a matter of fact, the use of half-tones is the primary reason for the development of harder surfaced calendered and coated varieties of paper, as well as the predominating factor in our selection of paper for any printing job.

In the order of their efficiency in half-tone reproduction, the hard surfaced papers may be rated as follows: Beginning with *machine finished* as the least efficient, efficiency increases as we use *English finish, supercalendered, dull coated*, and *glossy coated* papers, the last-named being the most efficient.

A half-tone is more lifelike in proportion to the fineness of its screen. The smoother the paper surface, the finer the screen that may be used. Generally speaking, the following are the screens which may be used with each of the different papers.

Soft surfaced (antique, laid, or eggshell) (also newsprint)........	65-line screen
Machine finished...	85-line screen
English finished..	100-line screen
Supercalendered..	120-line screen
Dull coated...	133-line screen
Glossy coated..	150-line screen

However, there is no little variation among the products of various paper manufacturers. For example, there are English finished papers of some brands that print better half-tones than so called supercalendered papers of other brands.

Among glossy coated papers there are some which have served experimentally for half-tones as fine as 400 screen.

In paper selection, then, we find further reason for our admonition to consult a good printer. It is important to select paper of a grade adequate to its purpose but of a grade no more expensive than necessary.

Reconciling Type and Half-Tones

Best type printing is possible on soft-surfaced papers. Best half-tone printing is possible on glossy coated papers. When a printing order includes both type and half-tones, it is necessary to reconcile the requirements of both in selecting paper.

One way, most easily done in books, is to use soft paper for text pages and to insert the illustrations printed on coated paper.*

Another way, most easily done in booklets, is to print everything on coated paper, selecting in this case a heavier type face so as to secure approximately the same legibility as would result from a medium heavy face on soft paper.

This has a disadvantage, however. The gloss reflects light and thus often produces a glare on the type page, a disadvantage which experience and experiment both show to be more than an imaginary one. Half-tones cover this glare. So, where colors are being used, the difficulty may be economically overcome by imprinting the type page with a light flat tint, such as yellow.

The difficulty may also be overcome by using a coarser screen and a dull paper, such as English finished or dull coated.

For lifelike reproduction and to avoid undue prominence in the screen itself, 133-line screens are, on the average, as coarse as should be used. On the other hand, finer screens, from 150 to 175—half-tones finer than 175 serve little practical purpose—produce almost unbelievably lifelike results.

Most users of printing will find it profitable to consider the use of finer half-tones than are now generally common. In sales printing it is quite usual to secure plates which may be also used, if desired, for magazine advertising. As most magazines use a supercalendered paper, on which 120-line screens mark the average limit of fineness, the printing is limited accordingly. Yet with the present low cost of half-tone plates, particularly in comparison with the total cost either of the printing or of the advertising space in which the plates are used, such a saving is really negligible.

Considering also the papers available for printing and the capacity of any good New York printer to manipulate half-tones of finer screens, there is every inducement for the buyer of printing to take fuller advantage of their possibilities.

Use Qualities

Since sales printing is ordinarily intended only to be read, to withstand ordinary handling in mailing or other distribution, and, if kept

---

*A variation of this method is to *hot-press* uncoated paper at the places where half-tones are to be printed. This, however, is expensive and comparatively rare.

for reference, to last only for a limited time, the question of use qualities seldom need be considered. Most book papers are amply strong and will last long enough for any ordinary use.

In operating printing, however, the use qualities are important.

Shipping labels, forms, letters, invoices, and the like, receive considerable handling, often rough usage. They must not tear easily.

These, together with documentary printing, such as deeds, mortgages, contracts, stock and bond certificates, insurance policies, financial statements, and the like, require paper which must possess longevity.

For an issue of bonds maturing ninety-nine years from date, a paper is needed which will provide a legible and legal instrument even at the end of this lapse of years. If a semi-annual coupon bond it must withstand the handling received while it is removed from safe-keeping 198 times for the clipping of coupons.

The term "bond" originally was applied to an all-rag paper possessing maximum longevity and strength and intended for such uses. Today, all-rag papers still are available, but ordinary bond papers contain little, if any, rag. This does not necessarily limit longevity but it materially limits strength and its resistance to tearing, wrinkling, folding, and bursting.

Hence, in the selection of bond, ledger, and writing papers, where the elements of longevity or strength are to be considered, the safe plan again is to consult a good printer.

CHAPTER XIII
The Binding

The Basis of Selection

The question of binding arises, of course, only in connection with booklets and books. The basis of selection is (1) attention value and (2) the usage it must withstand. In the binding itself there are to be considered (1) the cover material and (2) the method of binding together the text pages and the cover.

Cover Attention in Sales Printing

Getting favorable attention is always the initial step in selling; and sales printing is no exception.

It may be distributed through the mail, through retail stores, through inclosure in packages, or by other means. In any case, the cover, so far as possible, should attract the favorable attention necessary, in competition with other printing, or with other circumstances present at the time it reaches the prospective reader, to invite an examination of its contents or at least to insure that it will be saved for perusal later.

From the standpoint of copy and layout this is accomplished by the cover design and the cover title; from the standpoint of the cover itself it is accomplished by color and texture.

Durability in Covers

Ordinarily, attention value is of greatest importance in sales printing. Durability under use, however, is also more or less important, depending upon the individual circumstances, and in operating printing it is ordinarily the governing consideration.

Nearly all cover materials have a wide range of attention values because of their variety in texture and color. It is in their relative durability, therefore, that the main basis for choice is to be found.

Following are listed the main varieties of cover materials in order of durability.

1. Self-cover. (The outside sheet of text paper serving as the cover. Generally the least durable.)

2. Paper-cover. (So-called cover papers are heavier than text papers and available in wide color variety.)

3. Board-cover. (A thicker and hence stiffer variety of cover paper.)

4. Cloth-cover. (Board covers, inclosed in cloth usually sized to aid in imprinting.)

5. Imitation-leather. (Wide varieties in this form of cover material are now available. Both stiff and flexible.)

6. Leather. (Still the most durable, but of declining value by reason of improvements in imitations. Both stiff and flexible.)

Methods of Binding

All binding involves stitching by wire, or sewing by thread or decorative floss.

The stitching or sewing may be done either through the fold between leaves, when it is known as *saddle* binding, or sidewise, through all the leaves as close as practicable to the folded side, when it is known as *side* binding.

The cover, if flexible, may be stitched or sewed to the text leaves by the same operation. It may also be pasted on after the text leaves are bound; and it is always applied in this way when of a stiff material. Books so bound are known as *case-bound*.

Saddle binding, whether by wire or thread, results in the most convenient binding, in that the book will more readily stay open at any one place.

Ordinarily, books of as many as 64 pages may be bound in this way with only one row of saddle stitches through the back.

For a larger number of pages this style of binding is usually impracticable because of the difficulty in folding the leaves flat, and of the tendency for the ones on the inside and outside to tear off.

The book is then bound in more than one *signature* of 8, 12, 16, 24, or 32 pages each, which are then collated, sewed together, and case-bound or *cover-glued.* Or, the various signatures are side-stitched, the cover being pasted on afterward.

CHAPTER XIV
Preparation of Manuscript

Saving Money in Composition

A few weeks after the issuance of an edition of a booklet, a customer found it necessary to order from his printer a second edition of an equal quantity.

A second edition had not been expected so the type had not been kept standing. Nor had the previous edition been large enough to warrant electrotyping the forms. Yet the printer's bill was little more than half his bill for the first edition.

"Why?" was the customer's natural question.

"We had to spend a great deal more time on composition the first time," the printer explained. "Our compositors had to stop frequently to decipher the handwriting in your manuscript; they had to guess frequently whether to spell out or to abbreviate. Then when the proof was made up it was necessary, as you remember, to reset the type in order to make the necessary changes and corrections. The second time there were no corrections."

These remarks well summarize the value *to the customer* of turning over to his printer manuscript which is correct, legible, and complete as to instructions.

Correctness, Legibility and Completeness

Submit manuscript which is correct in the first place and does not lead to resetting, which is quickly legible and may be set in a minimum of the compositor's time, and which is complete as to all instructions so that the compositor has no guesswork—do these things, and you will avoid needless expense.

By correct manuscript is meant all that the term "correct" usually implies—spelling, capitalization, grammar, paragraphing, and the like. While a compositor will ordinarily correct common errors in spelling and punctuation, on the other hand, technical terms or others peculiar to your business may be unfamiliar to him.

Abbreviations frequently lead to needless expense. Nearly every firm uses abbreviations whose meaning is clear enough to every

employee or officer, but which are to be spelled out in the printing. Yet because they are commonly abbreviated the typist is likely to do the same in writing manuscript for the printer, so that unless the mistake is caught in time, it leads finally to resetting.

Corrections can be made, of course, on a printer's proof, but it is always far less costly to make them on the typewriter than in type.

The importance of legible manuscript is obvious. It is a question entirely of making it possible for the compositor to read it rapidly and hence set type rapidly.

By completeness as to instructions is meant the specifying of definite answers to every essential question that arises.

First of all, the compositor will want to know what face and size of type he is to use. This should be given in the upper right-hand corner. In case more than one size is to be used, a proper notation should be made on the right-hand margin wherever the size is to be changed.

Words to be capitalized should be capitalized in the typewritten copy. Words to be italicized should be underlined. In addition an explanation that these are the meanings intended should be given in the upper right-hand corner of the sheet.

Indentation is best indicated similarly. That is, indent the desired lines in the typewritten copy and state in the instructions that this is the meaning intended.

Other more specific instructions, such as the use of capitals with small capitals, are most clearly indicated by using on either the right or left margin the appropriate proofreading sign, a list of which is reproduced in the following chapter.

Computing the Space Required

With a definite number of words allowed for each piece of manuscript, it is a great convenience to have the manuscript so typed as to compute the number of words without counting them individually.

You can do this, and at the same time be assured of good manuscript from the compositor's standpoint, by standardizing upon typewritten manuscript, triple spaced, lines six inches wide, seventeen lines to the page, on standard 8½ x 11 letterhead-size sheets.

How to Prepare Manuscript
for Minimum Printing Costs

1. Write on only one side of the sheet.

2. Keep sheets flat, not rolled or folded.

3. Use paper of medium or heavy weight; avoid "flimsies."

4. Have copy typewritten. If you must submit handwritten copy, spell out in capitals all unusual proper names, scientific terms, and quotations from foreign languages. Underline the letter u so that it will not be mistaken for n.

5. If many corrections or any corrections running across the entire page are made, have copy retyped. Best practice is to retype pages containing corrections.

6. After original typing of copy and on each retyping for correction, reread the copy thoroughly. Do not turn it over to the printer without final reading and checking.

7. Do not abbreviate unless you want abbreviations in the printing. Preserve uniformity; do not use *Rev.* on one page and *Reverend* on another.

8. Don't submit "patchwork copy." If the sequence of paragraphs is changed, either have them retyped or cut them apart and paste together in their correct sequence.

9. Have lines double spaced and preferably triple spaced.

10. Make final editorial corrections on manuscript, not on proofs.

11. Show all specific instructions in the upper right-hand corner. Minimize oral instructions.

Such manuscript in elite will average 215 words in a page, and in pica, 180 words in a page.

How a Good Printer Helps

We have been concerned in this chapter with those features of manuscript and accompanying instructions which the customer may best determine.

When dealing with a good printer the customer need not concern himself with those other questions, such as paragraph indentation or leading. These play their parts in the legibility of the finished printing, but they vary with individual faces and are best left to the judgment of a good printer, who will instruct his compositors accordingly.

CHAPTER XV
Proof Corrections

Why the Buyer Should Read Proof

There are only two kinds of possible errors: editorial and typographical.

The most careful editor occasionally finds it necessary to make changes in the proof. Few can read proof of manuscript they themselves have written without seeing chances for improvement. Often after manuscript has been sent to the printer, something happens which makes changes desirable if not necessary.

How to Read Proof

Publishers and others who use much printing ordinarily employ proofreaders who do nothing else and who acquire remarkable proficiency.

Even where the volume of printing does not warrant an especially delegated proofreader, it is an advantage to have proof read by someone other than the author. An author, recalling what he wrote as he reads the type, may unconsciously pass over errors which one unfamiliar with the text would unerringly detect. Where an experienced proofreader is not employed, the best plan is to have the proof read aloud by one person and compared with the manuscript by a second.

Marking Proof

In marking proof it is an advantage to use the standard proofreader's marks. Once a person grows familiar with them, he can make them much more rapidly than he could write out the meaning in longhand.

Time is saved also when the corrected proof is returned to the printer's composing room. The compositor, knowing exactly what the marks stand for, can proceed more rapidly and with less chance of misunderstanding than if the corrections are written, particularly if the handwriting is not fully legible.

Avoiding Undue Costs or Complications

To avoid unnecessary expense in inserting these changes, it is desirable to make them with a view to keeping the resetting at a minimum. For example, suppose that in the preceding paragraph, first line, we decide to eliminate the word "corrected." This would so shorten the line that the entire paragraph would have to be reset.

We can avoid this, and confine the resetting to that line alone, by adding some other word or words of about equal length. This could be done in many ways; one way would be to insert the word "generally" in front of "saved."

Similarly, when additions are to be made, it is usually possible, by a little ingenuity, to take out other words or rephrase so that the resetting may again be confined only to the line or lines in which the changes are to be made.

The same knack for expanding or condensing is useful when the manuscript "runs over" a few lines or fails to fill the space allowed for it. These things happen at times in spite of our best efforts to compute space accurately in advance.

One other precaution will further serve to cut down the cost of author's alterations. It is: make corrections on galley* proofs instead of on page proofs. Sometimes corrections are such that entire lines must be added or removed. These changes would thus require that the lines in all following pages be shifted. Obviously, this can be avoided if the changes are made on the galley proofs *before* their division into pages.

---

* A *galley* is a long tray for holding set type; hence a *galley* proof is a long strip of proof before type has been made up into pages.

The Marking of Proof

The use of the following standard proofreader's marks, which are well known to all compositors, will save time and expense, and avoid errors in correcting proofs:

THE MARK	MARK IN PROOF	MEANING OF MARK
⊙	He bought the book	period
stet	He bought ~~the~~ book	let stand
⑨	He bought the book	invert
↓	He bought the book	push down space
𝒱	He bought Johns book	apostrophe
✕	He bought the book	broken letter
⊢⊣	A registered trademark	hyphen
⊐	He bought the book	indent em quad
(𝓆 ?)	He brought the book	query to author
⊏	⌐ He bought the book	bring to mark
⌣	He boug ht the book	close up
♂	He bought the book	take out
w. f.	He bought the book	wrong font letter
ℋ	His book, and Whereas	make paragraph
♆	He the bought book	transpose
italic	He bought the book	put in italic
sm. c.	He bought the book	small capital
caps.	He bought the book	capitals
roman	He bought *the* book	put in roman
❛❛ ❜❜	He bought the book	quotation marks
⌄ ⌃	He bought the book	even spacing
l.c.	He bought the Book	lower case letter
#	He bought thebook	space

CHAPTER XVI
The Time Element

New Models; New Tools

Recently one of the automobile manufacturers placed a completely new model on the market.

To the public this meant only a repetition of what had been taking place for years. To the engineers and toolmakers it meant months of work, designing and cutting new dies, jigs, fixtures, and special machinery so as to "tool up" the plant for quantity production of the new automobile.

Once new tools have been designed and built, however, the work of production is rapid and largely automatic.

Gigantic punches stamp out completely shaped fenders from sheet steel just as fast as the attendants can put in a "blank," pull the lever and take out the fender.

Powerful forging hammers form crankshafts from heated billets, ready for lathe and grinder to finish.

Drill-press jigs cut holes rapidly and accurately with little work from the operator except to pull a lever.

And so on throughout the plant, quantity production proceeds; various component parts are fabricated by means of dies and jigs previously made.

But whenever a completely new model is to be produced, all these dies, jigs, fixtures, and special machines must be redesigned— the work of months.

What would happen if the automobile manufacturer should produce to order instead of in quantity?

Printing, a "New Model" Industry

One result would be that cars could not be produced so quickly. True, production might be as rapid after "tooling up"; but that operation, even for large orders, might easily consume at least as much time as the actual production.

And yet that is the way a printing establishment must be con-

ducted. Printing is a "new model" industry. Printing is made to order. For each order there must be separate "tooling up"; type must be set; engravings must be made; both must be made into pages; the pages must be made into forms; and then comes one of the most precise operations of all—make-ready. In this, a skilled printer adjusts the clearance between the printing surface and the tympan of the press to the few thousandths of an inch—or slightly less—of the thickness of the paper which is to be fed between them.

These and other operations of utmost precision must be completed before the press can start production.

When there are half-tones, even greater precision is necessary. This is obvious enough when it is considered that ordinary half-tones contain thousands of dots to the square inch. These dots are of metal and hence unyielding. The paper is thin and almost unyielding. *Yet it must make uniform contact with all these dots.*

Then, when the same paper must be printed more than once, as in the color processes, it is obvious that each impression must *register* precisely with the others.

Production is rapid after these preparations have been made, but even in large runs they often take just as much time as the production itself.

Some of the operations of preparation have been vastly speeded up by ingenious inventions, such as machine typesetting and photo-engraving. But others are essentially hand operations and must always be; just as die-cutting, for example, in the metal-working trades, although speeded up by mechanical die-cutters, will always require the skill of a competent machinist in gauging dimensions and adjusting tolerances.

Since printing must be made to order, the preparation preceding the production of any order is a time element which is inescapable.

How to Save Time

What does this mean to the buyer of printing? In itself, little; in its bearing on the effectiveness and economy of his printing, it means much.

Modern printing equipment and management have gone far to

reduce this time element in printing. Nevertheless there is a normal minimum time which each individual order should receive.

A good printer is often able, in an emergency, to cut below this minimum. But he always does so reluctantly. As a service to his customer, he realizes its dangers.

There are two reasons. First, rush work increases his own costs and hence his prices. Second, it reduces quality.

Beware of the printer who promises an order in less time than the printer of known reliability is ready to promise.

The more obvious way for the buyer to save time is to call in his printer as early as possible, find out how much time the work will require, and then plan accordingly.

But there is occasionally the special case when printing is unexpectedly and quickly needed. A sudden price change requiring immediate distribution of announcements to the trade is an example.

In such cases the printer can help you save time *if you let him prescribe the specifications with that end in view.* His specifications will undoubtedly differ from those either you or he might otherwise draw up. But when speed is important, consult him. Tell him what you are up against. He will tell you how to plan the printing so that it can be produced in minimum time, creditably, and at reasonable cost.

Centralized Responsibility Saves Time

At all times, delegating the entire responsibility to the printer speeds up the work.

For one thing, this gives you only one source of supply to look to instead of two or three, as is the case when you also purchase paper, engravings, and electrotypes.

More important, it enables the printer to use the kind of paper and engravings best suited to each other, the kind whose behavior on the press he understands, and therefore the kind with which he is able to produce the printing in minimum time—and hence at minimum cost.

Choosing Paper to Save Time

As has already been mentioned in the chapter on Paper, many varieties are available. This variety extends to the paper's behavior

in the printing plant. Some can be printed more rapidly than others. Some dry faster than others. Some are affected by moisture more than others. Some "pick" more than others.

When speed is essential, the printer will select the kind which permits maximum printing speed. But whether an individual order happens to be rush or not, he can save time when he is able to use a paper whose behavior he can anticipate.

Saving Time on Engravings

A buyer whose business is in the architectural field was in the market for a catalog. In it he desired to reproduce some photographs of suburban homes.

A prominent feature of these photographs was the grass, trees, and shrubbery in which the homes were set. They were the kind of scenes which are exactly "cut out" for the soft effects possible by half-tones on dull-coated paper.

The printer pointed this out; and the buyer enthusiastically agreed.

"Very well," said the printer; "if that style of treatment appeals to you, I will see that the engravings are prepared accordingly."

"Oh, I already have the engravings!" exclaimed the buyer.

It then developed, however, that the buyer had not specified deep-etched engravings; and therefore dull coated paper would not have been practicable.

The buyer suggested that new plates be made, so valuable did he consider the printer's suggestion. Finally, however, in order to save him this expense, the printer, by experiment, located a variety of paper on which approximate, although inferior, results were secured.

It is obvious, of course, that this delay could have been avoided and better printing secured if the buyer had intrusted the engravings to the printer instead of ordering them himself.

CHAPTER XVII
The Cost Element

Printing Costs

Since 1914, wages and paper—two major elements in printing costs—have advanced approximately 100 per cent. Paper prices have receded somewhat from their extreme peak, but they still rule at approximately double their 1914 levels.

Labor costs in printing, as in all industries, were advanced during the war period and printing is the only major industry in which there has been no wage recession.

In the face of these advances, New York printers are today producing printing at selling prices which average much smaller advances.

This has been possible solely by lowering other costs, and is a record of which New York printers feel proud.

Reductions through Cooperation

Improved equipment, more efficient plants, better management and methods, lower prices of paper through standardization—these are the means by which these lowered costs have been achieved.

It is the firm conviction of New York printers, however, that buyers may still further reduce their own printing costs by accepting from the printer his offer to cooperate more closely with the buyer.

New Standards of Economy in Buying

Every buyer of printing wants to get each order for printing at the lowest possible price. This is only natural and common sense on his part. And it is precisely this which the printers of New York wish to help him accomplish.

But they desire to do it by placing at his disposal their managerial ability *applied to the planning and production of printing*, and not by doing work for less than a fair profit. As a matter of fact, the New York printers are agreed that, in the long run, they can give buyers equal quality at lower prices than the buyer can secure by writing his own specifications and then "shopping around," however thoroughly, for the lowest price.

This is on the assumption that the "lowest price" so secured includes equal quality which, as explained in Chapter IV, involves many elements which cannot be written into any set of specifications.

Skilled management by the printer, like skilled management in any field of industry, enables him to give better value to his customer and to make a better profit for himself *at the same time*.

To some, this may seem contradictory. To others, it will appear as a principle which they have observed to be universal in all industries, including their own. In the long run, the firms which deliver maximum value in proportion to selling price are the firms which also earn the largest profit.

To name over the industrial leaders of America is only to confirm the truth of this. In fact, so fully has it become a part of our buying philosophy that we usually accept as axiomatic that when we buy from the most prosperous manufacturer in any field we are, *per se*, getting utmost value.

Patents, Trade-Marks, and Printing

A corollary to this principle is the fact that expectation of profit has always been the mainspring of human effort. It is the incentive of inventors and of managers.

Our patent laws recognize this fact by giving to inventors a seventeen-year opportunity to profit from the fruits of their labor and their ingenuity.

In much the same way trade-marks (including copyrights) give protection in the making of profits to managers of business enterprises.

Clearly, there is no essential difference between an idea for a manufactured article whose originator may secure a patent or a trade-mark and an idea originated by the printer for a more effective or economical treatment of a piece of printing.

Who would contend that the printer is any less entitled to a profit!

And so it is not to be wondered at that when asked to bid on a job he has no incentive to furnish ideas unless he knows that he will be given the job to print at a price that yields him a fair profit. His price, through economies suggested by his ingenuity, will, in the long

run, be less than for similar printing produced from specifications less ingeniously devised.

Behind the Scenes with a New York Printer

We are quoting below substantially in his own words an experience of a New York printer:

"The Black Company used to be customers of mine until they hired a new auditor. He instituted a rule that in buying printing, they would issue specifications to six printers, get their bids, and then award the work to the lowest bidder.

"I was on their list but I didn't submit bids, so they called me up one day and wanted to know why. I said I couldn't afford to. I couldn't be lowest all the time so I'd have too much work for nothing figuring prices on jobs I wouldn't get.

"I tried to show them where they'd save money if they'd go back to their old plan and leave the specifications to me. I even cited cases where I had saved them substantial amounts in this way. But I couldn't convince them. The auditor seemed to think I would be making too much money. So I passed them up.

"About that time I called on White & Co. They happened to be in the market for a small job. I went over it with them and mentioned a few changes that would make it cheaper to print. They said, 'You're the first printer who ever tried to save us money. We've had so much trouble finding a printer who didn't try to put it over us on every chance he got that we're going to give you this job and try you out.'

"Well, they're one of my best customers today. I make a good profit on their business, but I'm saving them money all the time, because they leave specifications to me.

"Here's a job I'm printing for them now. They could take it after I print it and by shopping around enough could probably duplicate it for less money. But if they didn't have this job as I have printed it to go by, and had to draw up their own specifications, they couldn't get it as cheaply."

Determining What to Spend

So varied are the materials and processes of printing that any order can be produced in a wide range of prices.

To an extent, some New York printers specialize in fine printing, others in medium-quality printing, and others in cheap printing. But these distinctions are more apparent than real. Most New York printers realize that any customer, in the course of a year, has need for printing of a wide range of costs and is prepared in each case to supply printing of a grade and cost which its purpose and use require. How can we best determine what to spend in any individual case?

In general, this is a question of what kind of printing will secure its intended results most economically.

The best sales printing is the kind which produces inquiries or sales at the lowest cost per individual inquiry or sale, or the kind which most effectively increases the efficiency of salesmen or other factors in the firm's general sales activities.

In the chapters on Illustrations and Color it was shown that these factors in printing, although adding to the cost, increase its effectiveness.

A user of one-color unillustrated printing at a cost of $1,850 secured 1,270 inquiries, each inquiry thus costing $1.47. One-color illustrated printing at a cost of $4,760 brought 10,780 inquiries, each inquiry thus costing 45 cents.

In this case, the higher cost of the illustrated printing was wise, in that it reduced the cost of inquiries from $1.47 to 45 cents.

Similarly, instances could be cited in which color, although adding further to the cost of the printing, has made further reductions in cost per inquiry.

In other cases where the purpose of the printing is to supplement the work of salesmen, it is not so easy to separate its results from those other sales activities to which it is supplementary. There the budgeting plan, similar to the plan of budgeting advertising, has been found most useful in determining how much to spend.

In operating printing the result sought is greater efficiency.

Forms often are printed in which spaces are provided for the recording of information the value of which is less than the cost of compiling it; these forms might then be correspondingly reduced in size. Conversely, the addition of useful information even at the greater cost of larger forms is a common sense economy.

The question of the length of time the printing is to be referred to and of the usage it receives also is a factor to be considered. These things concern the grade of paper to be used; and it is fully as economical to make sure that paper of adequate quality is selected as to avoid unnecessary quality.

Consolidating Orders

One of the most fruitful fields for greater economy in buying print-

ing lies in the consolidation of individual orders, which is possible when the buyer ties to one printer of known integrity, and makes use of his capacity to cooperate as described in this book.

This saving is most pronounced in the purchase of operating printing, which consists of many varieties used regularly. It is also considerable in sales printing when two or more orders are to be placed at the same time or within a limited period.

One large New York corporation, using thousands of different forms, formerly ordered them one or two at a time as needed. A New York printer studied the situation and by simplification of sizes, colors, weights, and grades of paper, and by consolidation in printing, made a material saving in total costs.

Today, this corporation need not order nearly every day and does not unexpectedly run short. A requisition to the printer secures any supplies it needs *whenever it needs* them.

When first approached with this idea by the printer, the officials of the corporation considered it impracticable. Too many sizes, none used in exactly the same quantity, constant changes, additions, and eliminations—these were some of the difficulties they brought up.

They are the difficulties that may at once occur to you in connection with your own printing, unless you have fortunately already found the solution. Don't let them deter you from the economy and convenience of group buying. Tie up with a good printer. Let him understand your problem. Unless it represents one exception in a thousand, he will solve it for you.

Centralized Responsibility Cuts Costs

A large buyer of printing telephoned the managing director of the New York Employing Printers Association and asked for advice on a bothersome problem.

A printer had delivered to him an order for 250,000 booklets in which the captions for the illustrations had been improperly placed. A caption intended for one illustration appeared under another, and so on. The total printing bills amounted to several thousand dollars. It would represent a total loss to the buyer unless he could secure relief by fixing the responsibility for the error.

"Didn't you approve a final proof before the order was printed?" the buyer was asked.

"No, we didn't consider that necessary, since we supplied the printer with a complete set of electrotypes."

"Then the electrotypes were incorrect?"

"Well, possibly so."

"Did you approve proofs of the electros?"

"No. We didn't consider that necessary because we ordered them direct from a competent electrotyper to whom we delivered the original engravings and type captions."

"Then the captions were misplaced at the time the electros were made. Whom did you make responsible for that: your printer, your engraver, or your electrotyper?"

"That's what we want to find out from you. We want to know who is responsible."

Cases like this are of almost daily occurrence. Thinking he saves money thereby, the buyer orders engravings from an engraver, electrotypes from an electrotyper, type composition from a compositor, and printing from a printer. Then, when a mistake occurs the question arises: Who is responsible? This is always the gist of the appeals which reach our association headquarters. And, in most cases, who can say?

We need not try to prove that the buyer, in the end, does not receive lower prices by going into the business of assembling printing in this way, for buyers who try it usually find this out for themselves. We may well point out, however, that the difficulty in fixing responsibility for errors always arises by reason of the divided responsibility. When the buyer centralizes responsibility in one place —his printer—then there is no question who is responsible. And, strangely enough, errors are much rarer in the first place. *Centralizing responsibility in your printer is a certain way to minimize printing costs.*

CHAPTER XVIII
Cooperation

The Aim of the Association

The New York Employing Printers Association, as its name implies, is an organization of New York printers for the purpose of advancing the interests of the New York printing industry. It is one of the oldest trade associations in the city.

It was one of the first to find, as other industries have found, that the best interests of the printer and his customers are one and the same. And so, in its study of the problems of marketing printing, a subject which has received more and more of its attention in recent years, it has given equal thought to the interests of both customer and printer.

We have devoted so much emphasis to the desire of the New York printer to promote the more profitable use of printing by his customers that you, as a reader, may well ask, "Why?" Why should a printer want to help his customers buy printing more economically, when the printer's interest would seem rather to favor making his charges as large as possible? Why should a printer interest himself in the profitableness of his customer's printing when his first thought seemingly should be merely to turn out the work and collect his bill?

The answer to all such questions is that he realizes he can thereby best promote the interests of himself and his industry. His aims are frankly not visionary or altruistic. They represent merely his sound business judgment based on an experience with the principles set forth in this book. Because this experience has demonstrated the soundness and the value of these principles to both customer and printer, he seeks through this book to secure their more widespread adoption.

Their results to the printer are (1) an ability to retain a fair profit and to prevent unfair methods of competition and (2) a broadening market for the sale of printing.

Their results to the customer are (1) more economical printing, (2) more effective printing, and (3) printing more suitable for its purpose.

All of which may be summarized as *more profitable printing*.

Lower Printing Costs

In any industry, the selling price of the product is always one measure of the progress of that industry. Regardless of the usefulness of its product, its selling price is inevitably a factor in its value to its market.

No industry offers more spectacular current proof of this principle than the automobile industry. While the reliability and usefulness of automobiles have been consistently improved since they first came into common use, nevertheless the industry's colossal growth would obviously have been greatly curtailed had the price of automobiles not been brought within the reach of the masses.

It is the judgment of New York printers that much printing, as it is being produced today, is entirely too expensive. They believe they know how to eliminate excessive expense. They know the cause to be, not excessive profits taken by the printer, but a failure to make proper use of the available materials and processes of the printing art and of the printer's managerial capacity in planning printing for economical production.

They believe many users of printing would use still more if they knew how to buy it at more reasonable prices. They believe there are many firms that are not using printing at all but would use it if they knew how to buy at more reasonable prices than quoted by printers not conversant with what the printing is wanted for, as distinguished from the paper and other specifications on which quotations were asked.

In these and other ways, New York printers believe they are able to help the buyer by reducing his costs and to help themselves by thereby selling more printing.

More Profitable Printing

One of the largest manufacturers of power transmission belting has made a study of the belting requirements of different industries. He has tabulated the standard types of machinery. For each drive on each machine he has determined by comprehensive tests the one most economical size and style of belt. A manufacturer of industrial lubricants has similarly studied the varied requirements of his customers.

Such manufacturers have gone far afield from their primary business of manufacturing. But by so doing they have promoted the more profitable use of their products; they have correspondingly profited themselves through expanded markets and increased sales.

It is for the same reason that the printers of New York have gone afield from their primary business of producing printing and have studied the uses of printing by their customers. Since printing, unlike belting or oil, deals with the influencing of human behavior, they have not been able, nor will they ever be able, to tabulate and prescribe with the precision possible with inanimate material, such as belting or oil.

Nevertheless their studies have progressed to the point where they know they can go far to promote the use of more profitable printing for their customers. And, just as the manufacturer expands his own market when he promotes more profitable uses of his product, so does the printer.

The Wane of "Caveat Emptor"

But there cannot be the necessary cooperation between printer and customer without faith, ability, and integrity.

The profitable buying of printing recommended by this book is predicated on the printer's ability and integrity and on the customer's faith in the printer.

If the buyer conceives a printer to be a mechanic with a habitual smudge of ink on his brow, who calls occasionally to ask "if there's any printing today," he cannot be expected to respect his counsel, much less seek it. Nor, if he feels a printer to be one with whom to deal with suspicion and caution, can he be blamed if he refuses to take him into his more intimate confidence. The principle of *caveat emptor* (let the buyer beware) is inconsistent with the profitable buying of printing.

Where it still exists, it is due either to printers who lack ability and integrity, or to buyers who do not realize how the good printers of New York are prepared and able to serve them.

Fortunately, confidence has been growing between printer and buyer in the New York market. The printers who sponsor this book pledge themselves to do their part in furthering it.

132

How to Secure Cooperation

What the Buyer Can Do

1. Give his business regularly to the same printer.

2. Inform his printer fully as to the purpose of each order.

3. Consult his printer about specifications, or leave them entirely to printer's judgment.

4. Turn entire responsibility over to printer, including paper, engraving, and electrotyping.

5. Consolidate orders wherever possible.

6. In large organizations, have department using the printing negotiate directly with printer and not through purchasing department.

7. Avoid rush jobs as far as practicable.

8. Use standard sizes.

9. Give printer manuscript which is legible, correct, and complete as to instructions.

10. In correcting proof, do so with a view to keeping resetting at a minimum.

What the Printer Can Do

1. Give intelligent study to the requirements of each customer.

2. Help customer take full advantage of available materials and processes in securing printing of utmost suitability.

3. Recommend specifications insuring maximum effectiveness in printing which can be produced economically.

4. Take entire responsibility, and save time.

5. Give customer the benefit of lower prices.

6. Learn more readily the purposes and uses of the printing in detail and thus serve more intelligently both in advising as to specifications and in producing it.

7. Give customer better printing at lower prices.

8. Give customer lower prices.

9. Give customer lower prices.

10. Make smallest possible charges for author's alterations.

The Main Steps in Cooperation

Just as the printing industry generally can best serve its own interests by cooperation with its customers, so each individual printing order is the cooperative product of buyer and printer.

Although only this chapter is so entitled, the entire book might have been called "Cooperation." In its various chapters we have sought to clarify, in relation to individual printing orders, the various steps in the closer cooperation between buyer and printer to which this book is devoted. As a final means of emphasizing them, we reproduce the most important ones on page 133.

Parallel to each step which the buyer may take is shown the corresponding step which the members of the New York Employing Printers Association pledge themselves to take.

The Printer's Invitation

This book, then, constitutes the New York printer's invitation to you, as a buyer, to make full use of the cooperation he is prepared to give you in the planning of your printing.

It is his aim to assist you to plan and use printing of the utmost effectiveness, economy, and suitability. For in exact proportion as the use of printing grows more profitable, its use will grow more extensive. Therein lies the printer's incentive to play his part in this program of cooperation.

If this book gives you a clearer conception of printing as a servant of business, of how to plan printing advantageously, and of the New York printer's capacity to serve you, those printers who have contributed to its preparation will feel that their time and effort have been well worth while.

It is a commentary upon the New York printer's capacity to serve his clients in the Four Steps in Planning Printing as discussed in Chapter II, that this book was conceived, planned, written, illustrated, laid out, set up, engraved, electrotyped, printed, and bound solely by members of the New York Employing Printers Association, as has been the case with its entire advertising campaign.

INDEX

i

INDEX

INDEX

INDEX

INDEX

v

Rights & Privileges of Press
by
Frederick S. Siebert —
_____
Arthur t Crossman —
_____
Hale — Law of the Press